Use and Barriers to Use of Health Care Interpreters for Limited English Proficiency Patients:

A Case Study of Yale-New Haven Hospital

By

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Executive Summary:

The inability to speak English presents an obstacle to accessing health services in the US. Health care interpreters are thus increasingly recognized as enabling better communication between clinicians and their patients. The benefits of enhancing linguistic competence in health care delivery systems are three fold: 1) benefits for health care organizations; 2) benefits for the patients; and 3) greater adherence to ethical principles underlying high quality patient care.

The objectives of this qualitative study conducted at Yale-New Haven Hospital were to describe the variability in use of Interpreters Services by different patient care units at YNHH, identify determinants of use, and recommend interventions for enhancing use of Interpreter Services in the hospital setting. Findings reveal that units varied enormously in the use of IS. Respondents from patient care units with lower use of interpreters often reflected that Interpreter Services offered little added value, and took a long time to respond to requests. These low user units also reported having had a sentinel (bad) event, in a previous use of Interpreter Services, and not being aware that interpreters can be provided over the phone. Recommendations for increasing the use of interpreters at YNHH include: 1) capitalize on clinical staff; 2) implementing a quality improvement initiative; and 3) increasing marketing of Interpreter Services. Meeting demand and obtaining management support is essential to achieving these objectives. A program proposal for increasing Interpreter Services use was developed and submitted to the YNHH Interpreter Services office, to provide specific interventions directed to increase the use of interpreters.

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I. Introduction:

A. Study Objective:

The objective of this thesis is to determine the use and barriers to use of interpreters for limited-English proficiency (LEP) patients at Yale-New Haven Hospital (YNHH). This study will highlight the importance of the use of interpreters in health care by articulating the benefits of using interpreters for both healthcare providers and patients. I will examine the patterns of use of interpreters at YNHH, as well as the barriers/facilitators to use of interpreters as perceived by the nursing staff. Finally, the thesis will offer a prototype for increased use of interpreters in U.S. hospitals, including specific recommended actions and an implementation plan for YNHH.

B. Background:

The inability to speak English is regarded widely as an obstacle to access of both primary and emergency health services in the Unites States. According to the 2000 Census, about 18% of Connecticut residents speak a language other than English at home and 10% of the Connecticut population is foreign born[1]. Limited English proficiency restricts interactions with others and presents a substantial problem in the flow of information, especially since ninety percent of the information needed to make a diagnosis comes from the patient interview[2]. Because most physicians and nurses speak only English, LEP patients often must rely on interpreters to communicate with health care workers. Linguistic Competence is defined as the ability by health care providers and organizations to understand and respond effectively to the linguistic needs brought by patients to the health care setting.[3]

The goals for the provision of interpreters are to:

- Increase communication between patient and provider
- Increase compliance with treatment as patients understand treatment procedures
  Respect patient confidentiality
- Avoid role reversals and protect parent-child relationship structure and roles
  Provide emotional support
- Foster informed decision-making
- Refrain from placing the responsibility for the provision of an interpreter on the patients themselves

B.1 Benefits to Health Care Organizations and Patients of Enhancing Linguistic Competence in Health Care Delivery Systems:

B1.1 Benefits for a Health Care Organization:

B1.1a Meeting Requirements Set Forth by Federal Laws:

A major benefit for healthcare organizations to providing interpreters is a legal benefit. Several laws and regulations exist to provide interpreters to patients whose proficiency in English is limited. For instance, according to Title IV of the Civil Rights Act of 1964, recipients of federal financial assistance must take steps to ensure that LEP persons can meaningfully access health and social services[4]. Nearly every health care provider is bound by Title IV, because federal funding of health care is almost universal.[5] In addition, the Hill Burton-Act of 1946 mandates a "community service obligation", which has been interpreted by the Office of Civil Rights as an obligation to provide language assistance to those in need.[6] Further, the Americans with Disabilities Act of 1990 considers language barriers as disabilities and discrimination against persons if no steps are taken to increase communication. Finally, Medicaid and Medicare regulations require the providers who receive reimbursements to render culturally and linguistically

appropriate services. In fact, Medicare reimburses hospitals for the cost of the provision of bilingual services to patients.[7]

B1.1b Decreasing the Likelihood of Liability and Malpractice Claims:

The ability to communicate well with patients has been shown to reduce the likelihood of malpractice claims. Failure to provide interpretation and translation services may result in liability under tort principles in several ways[8]. For example, providers may be liable for damages as a result of treatment without informed consent. Moreover, failure to convey treatment instructions accurately may constitute negligence on the part of the providers as mentioned under the regulations dictating provision of care for LEP patients. Patients of physicians who are frequently sued had the most complaints about communication[9]. The use of qualified medical interpretation and translation services enhances patient-provider communication, thereby decreasing the risk of malpractice.

B1.1c Meeting Accreditation Standards:

Accrediting agencies that review and certify hospitals and other health care facilities that play a pivotal role in setting standards for hospital care require linguistic competence. For instance, the Joint Commission on the Accreditation of Healthcare Organizations (JACHO), which accredits hospitals and home health agencies, and the National Committee for Quality Assurance (NCQA), which accredits managed care organizations (MCO), have adopted standards that require 'language access' in health care.

Specifically, JACHO standards require health care organizations to "have a way of providing effective communication for each patient served".[10] These standards expect that patient and family education take into account language and culture[11].

Moreover, patient's rights, outlined by hospitals according to JACHO mandates, list rights to respect, privacy, full explanation of care, confidentiality, emotional support and informed decision making. Providing persons with these rights reflects the need for the presence of an interpreter in interacting with LEP patients.

Finally, the NCQA requires that MCO enrollees be provided with written materials that they can understand[12]. The NCQA uses the availability of linguistically appropriate services as a measure of quality in the Medicaid version of HEDIS.

B1.1d Increasing the Market Share:

Provision of interpreter services may help attract patients to certain healthcare organizations in this competitive marketplace. Strategies to increase the enrollment and retention of satisfied health care consumers are essential to the functioning of primary health care organizations. Providing interpretation and translation services is a key strategy for marketing to the changing population of many cities and states, as is true in Connecticut. Tables one and two in Appendix A respectively show the percent difference in population by race for Connecticut from 1990 to 2000 and a profile on general demographic characteristics of the New Haven population.

B1.1e Increasing Compliance with Treatment:

Understanding the treatment procedure is an essential step to complying with the recommended treatment and following a physician's guidelines. Language barriers, which interfere with a patient's understanding of the treatment process, may lead to decreased patient compliance. Often, patients fail to act on the advice given to them by a doctor because they do not understand what the doctor is trying to communicate to them, or because they fail to remember what they understood the doctor said during the consultation. Research has shown that approximately one-third to one-half of patients either fail to take their medicine as prescribed, or fail to follow medical advice.[13] Moreover, in testing whether the ability of physicians to speak the same language as asthmatic patients promotes patient compliance and the use of scheduled office appointments in preference to emergency services, a study found that patient compliance and more cost effective use of ambulatory care services may be associated with the ability of physicians to speak the same language as their patients[14]. On the other hand, another study demonstrated that language barriers may decrease the likelihood that a patient is given a follow up appointment after an emergency department visit but patients who experience language barriers were equally likely to comply with follow-up appointments[15]. These results suggest that non-compliance might not come from the patient not being willing to pursue treatment but it might be associated with a lack of communication and understanding between the physician and patient.

B1.2 Benefits for the Patients:

B1.2a Increasing Access to Health Care:

For some populations, language issues have been identified as the single greatest barrier to healthcare access[16]. Access to health care can be greatly impaired by language barriers, which render communication between health care professionals and patients difficult, increase the patient's perceived sense of vulnerability and increase the patient's fear of the health care system. The effect of language on medical care are threefold: (1) language may represent a communication barrier; (2) limited English proficiency is associated with socioeconomic factors known to be correlated with decreased utilization of care (i.e., lower income, lower educational level and lack of insurance)[17]; and (3) language, being closely related to culture, may signal differences in values about health behaviors or use of healthcare [18,19].

Obstacles to seeking health care emerge at the preventive care level from the language barrier preventing patients from communicating to the provider that they desire screening, or preventing providers from discussing or offering screening in an effective way. Moreover, preventive health messages directed at a certain population, such as anti-smoking, healthy living ads or newspaper articles might not reach their audience when language barriers exist, which thus reduces awareness of existing health measures to that population and limits their access to seeking preventive care. A study looking at the relation of language to use of preventative services in a system with universal access, found that women whose main spoken language was not English were less likely to receive important preventative services such as breast exams, mammography and Pap testing[20].

In examining factors which deter non-English speaking women from attending their general practitioner for cervical screening in the city of London, researchers showed that women were enthusiastic about cervical cytology screening once they understand the purpose of the test and the call and recall procedures[21]. The basic factor of understanding points to the need to eliminate the language barrier between patient and physician, either through the use of bilingual medical professionals informing patients or through the use of interpreters.

Interpreter services can increase access to health care, as demonstrated by several studies. For instance, patients who used interpreter services had a significantly greater increase in office visits, prescription writing, prescription filling and rectal exams compared to a control group, findings which support the hypothesis that interpreter services enhance LEP patients' access to care[22].

Moreover, not being fluent in English is an important barrier to the use of physician services, when looking at the issue of seeking medical care and at the use of health care services by LEP patients. LEP patients were equally likely to report that they saw a physician at least once during the previous three months. However, among patients who saw a physician a least once, LEP patients had 29% fewer physician visits[23]. Finally, a study of the deterrents to access and service for Medicare Hospice Benefit, cited language barriers as one of the most important obstacles to access of health care for Hispanics[24].

Language barriers present a significant hurdle to access of health care, both preventative and in the use of services. Interpreter services have been shown to increase patient's understanding of the services available and of the course of treatment to follow. Thus, it can be proposed that interpreters can increase access to health care for LEP

patients. Measures should be established to enforce use of interpreters for LEP patients as access to health care is essential to maintaining a healthy and productive society.

B1.2b Increasing Patient Satisfaction:

Patient satisfaction with their care reflects patient's attitudes towards treatment, quality of care and health outcomes. Communication plays an important role in a patient's satisfaction with health care and appropriate use of interpreters as well as increasing language concordance between patients and providers may improve satisfaction among LEP patients.

Research examining patient satisfaction and willingness to return to an emergency department (ED) among non-English speakers showed that non-English speakers were less satisfied with their care in the ED, less willing to return to the same ED if they had a problem they felt required emergency care, and reported more problems with emergency care[25]. Patients who communicated through an interpreter or who did not have an interpreter when they thought one was necessary were less satisfied with the patient provider relationship[21]. These patients rated their providers as less friendly, less respectful, less concerned about the patient as a person and less likely to make the patient comfortable[26].

Additionally, examining patient's ratings of communication by health care providers with patient language, showed that Latino/Spanish respondents are significantly more dissatisfied with provider communication than Latino/English and white respondents[27].

B1.2c Increasing Quality of Care:

Quality of care for LEP patients may be compromised if a barrier in communication exists. Several studies indicate poorer quality of care among LEP patients compared to other patients. For instance, researchers demonstrated that Hispanics with isolated long-bone fractures were twice as likely as non-Hispanic whites to receive no pain medication at the UCLA Emergency Medicine Center[28]. On the contrary, another study showed that the quality of diabetes care for non-English speaking patients was as good as for English speaking patients[29]. However, the reason for this is unclear as physicians may be achieving these results through more frequent visits or through more laboratory testing.

B1.2d Decreasing the Cost of Health Care for LEP patients:

The cost of health care for LEP patients might be higher than for non-LEP patients as non-English speaking patients are less likely to use primary and preventive services and more likely to use emergency facilities[30]. In addition, language barriers decrease patient's understanding of their disease processes and subsequently impact their compliance with treatment and follow up. All these effects may indirectly increase the cost of health care for this population. Researchers found significant differences in test ordering behavior and length of stay when physicians believed they were confronted with a language barrier. Mean test charges were $38 higher and patients remained in the ED an average of 20 minutes longer when a language barrier was present[31]. A possible explanation for this premium is that physicians were compensating for the diminished diagnostic power of the diagnostic communication with the patient, by increasing the number of laboratory and radiographic tests[32]. Providers may also have believed that LEP patients were less likely

to understand and comply with follow up instructions and therefore, additional tests were mandated to cover all possible sources of illness.

The cost of care provided to patients might also be calculated by the amount of time a physician spends with a patient. However, no differences have been found in the time physicians spend providing care to LEP patients vs. English speaking patients. Physicians may believe they are spending more time with non-English speaking patients because of the challenges of language and cultural barriers[33]. The time component of a more difficult interaction with an LEP patient therefore does not seem to increase the cost of care provided.

B.2 Ethical Basis for Providing Interpreter Services:

Medical ethics provide support for an increased use of interpreters in health care by outlining an ethical basis for the provision of interpreter services. The principles guiding decisions in medical ethics are non-maleficence, beneficence, respect for autonomy and justice[34]. These four principles apply in communicating with an LEP person as they set norms to which physicians must adhere to empower the patient.

B2.1 Principle of Non-Maleficence:

Non-maleficence or the "do no harm" principle seeks to establish a relationship between patient and physician which fosters communication, trust, and defines the role of the physician with respect to the patient. Non-maleficence is accomplished by seeking to understand what the patient expresses, through the use of an interpreter, so that no harm is done to the patient from disregarding symptoms or previous conditions. Additionally,

the interpreter can ensure that the patient explain which drugs he/she is taking, thus preventing possible drug interactions. This basic form of communication minimizes harm being done to the patient. Trust in the physician essentially depends on the patient's belief that the physician will "do no harm", and will help in the healing process.

Non-maleficence also defines the role of the physician with respect to patients as it sets norms upon the behavior of the physician, especially in the case of the parental approach to medicine. The role of the physician as informant and bearer of knowledge promote his/her acting as an intermediary in the care process and not as the autocrat manager of care. This role sets a boundary with the patient, which is not present in the parentalist concept of medicine. A powerful ethical problem faced by professionals in medicine spurred from the imbalance of knowledge they faced when confronted with a patient. Experts assert that physicians speak a "strange and often unintelligible dialect"[35], which results in gaps in communication between physician and patient. This imbalance of knowledge prompted the physicians to adopt a parental role and thus act on behalf of their patients. The patient was considered a child, unable to make decisions, which accentuated his feeling of powerlessness. An LEP patient in this situation is doubly helpless, as he/she does not understand anything of what is being said about them. This lack of possible communication accentuates the ease for physicians to treat LEP patients as children. Patients are, in some sense, not far removed from babies, who cannot yet speak, but observe the world with wide-open eyes.

The communication barrier between patient and physician exposes physicians to make decisions for the patient, in the interest of time and in his/her attempt to demonstrate his/her superior knowledge. Faced with the potential for discrepant views of what

constitutes illness in cross-cultural exchanges, the provider must realize what it means for him/her to be in the dominant role in order to consider the patient's views and role in the illness process[36]. Culturally inappropriate decisions might ensue if the physician is not aware of the patient's cultural norms and fears.

The parental attempt to professing medicine and healing yields only a superficial solution, as, once discharged, the patient will not continue a treatment he does not understand or which goes against his values. The presence of an interpreter, in this case, would establish the role of the physician as teacher, since a conversation could take place between the patient and his physician. The patient would then be involved in the process of his care and the physician would be able to make a clear decision as to the cause of the illness and the significance of the symptoms. An interpreter thus prevents an autocratic decision by the physician based on the parental model and integrates the patient in the care process. Communication between patient and physician fosters trust and learning versus parentalism, factors which will promote non-maleficence.

B2.2 Principle of Beneficence:

The principle of beneficence or "do good" is outlined by increasing provision of health care through the use of interpreters, defining the role of the physician as teacher and thus, increasing access to health care.

The principle of beneficence further defines the role the physician should take with respect to patients by portraying the physician as teacher to patients versus merely provider of care. As physicians are faced with complex situations asking for their complete involvement with patients to provide the best care possible, their role often

extends past the professional duties assigned to them, since their primary obligation is to provide the best possible treatment to their patients. The physician's role extends to that of teacher as he is faced with a strong imbalance in knowledge. The question of whether physicians should teach their patients dates back to ancient Greece, with the quarrel between physicians who practiced on slaves versus physicians who practiced on free men and sought to teach their patients. "Because knowledge confers power, the ignorant, to the extent of their ignorance, become powerless. For better or for worse, patients can only submit themselves to the superior knowledge, authority, good intentions, and technical ingenuity of the doctor"[37]. This imbalance in knowledge is further exacerbated when the patient is of limited-English proficiency as ignorance in language is added to ignorance of medicine. Thus, the patient, in addition to not understanding the medical terminology explaining his condition, cannot directly communicate with the physician. In order to improve a patient's condition and provide effective treatment, the physician must function as teacher, sharing information with the patient and engaging him more actively to maintain good health. The covenantal image for the health care practitioner pushes the professional unequivocally in the direction of teaching. However, good teachers do not attempt to transform their students against their will, or by charming them out of their faculties, or by managing them against their back[38]. Thus, physicians need to understand one's habit and culture as part of one's set of values that he must respect and abide by, even if they interfere with the course of treatment usually prescribed. The patient has the right to make an informed decision in accordance with his own cultural norms and beliefs, after the physician has given him the tools that foster a patient-appropriate decision-making.

The physician should also consider teaching the family of the patient, as they are essential to the continuation of care once the patient is discharged. Compliance rates improve when the physician teaches not only the patient but also the patient's family[39]. Family or other caregivers face the burden of caring for the patient once he/she is discharged from the hospital and thus no longer the responsibility of the attending physician. These caregivers need to learn the resources necessary to care for their suffering or infirm relative and it is the duty of the physician to impart his knowledge upon them. Possessing knowledge about one's condition and health comes as a result of the beneficence principle defining the role of the physician as teacher and enables patients to make informed decisions about their care. In medical care, "a reciprocity of giving and receiving thus nourishes the professional relationship"[40]. Culturally appropriate communication promotes feelings of responsibility. It enables the patient to acknowledge ownership of his/her health, essential mechanisms in order for the patient to comply with the physician's recommended treatment.

Problems related to efficiency also surface as one cares for LEP patients. The problem one might face in this situation surfaces as "individuals bring in themselves" to the hospital. In addition to the current condition for which they are admitted, patients bring with them their personal and medical history, their idea of a diagnosis and feelings towards care. Ignoring this background because of language barriers would seriously undermine the outcome of care, as the patient would feel ignored, isolated and distrustful of the medical community. Spending more time initially with patients requiring language assistance will promote effectiveness in the long run as patients will be less afraid and more trustful of the system. This positive interaction will be likely to reduce risks of

readmission, non-compliance and prevent the complete loss of a patient from the medical system.

B2.3 Principle of Respect for Autonomy:

Providing an interpreter establishes respect for the patient as a person and for his/her autonomy as it empowers them to make decisions based on their disease or condition. The notion of respect for the patient is essential to delivering quality care in the hospital setting. Respect, in itself, is tightly linked to speech and understanding. Kant mentions the concern for respect of the person as essential to his deontological theory by which one must act in such a way that the principles of your actions can serve as universal laws, that is, maxims on which all other autonomous persons could act. Emphasis is placed on the need to treat the patient as a person with decision-making capabilities, regardless of language or culture of origin. Human rights need to be respected and one should not be ushered through the care process because he/she cannot understand what is being said. One life should count for one life and patients should be given equal opportunities to be taught about their disease and encouraged to decide the course of treatment best for them. Because the nature of the work in a hospital is demanding and that physicians are under time constraints to provide care to patients, they might neglect patients with whom they are unable to communicate and dismiss them as too burdensome. This dismissal can lead to poor care and thus a neglect of basic human rights.

Respect for the person is also seen in the acceptance that other cultures and individuals entertain beliefs and norms different from that of Western culture and that one should be allowed to live according to one's own beliefs. In the middle decades of

the nineteenth century, the foreign born occupied a disproportionate number of asylum places, comprising a far greater percentage of inmates than their numbers in the general population[41]. Incarceration was found then as a way to isolate people who seemed too burdensome to the rest of society. Thus, one that others cannot understand could seem mad as he attempted to communicate with third parties and was disposed of in an asylum. Allowing an individual to communicate with others is a human right and must be respected. In the case of truth telling, the question raised is not whether the physician tells the truth about his patient's condition but how he tells the truth. This distinction is crucial to the respect of individual's cultures, as in some cases, older parents are deemed deserving of peace without the burden of knowing their fate. The decision concerning their medical care rests with their children and they do not wish to be informed of the specifics of their disease. European-American and African-American respondents were more likely to view truth telling as empowering, enabling the patient to make choices, while the Korean-American and Mexican-American respondents were more likely to see the truth telling as cruel, and even harmful, to the patients[42]. Conflicts in respect for individuals of different cultural background arise through collision in manners and decorum.

B2.4 Principle of Justice:

Justice is fulfilled by not discriminating on the basis of culture and language and thus depicted in the person of the health care interpreter who enables the patient to act of his own free will after having understood his/her options.

Justice also requires the maintenance of patient privacy, so as to preserve one's established position in society. In the state of helplessness that disease brings upon individuals, respect for one's condition demands maintaining confidentiality. A patient's disease pertains to him as his own and thus should not be disclosed in public for others to hear. Disease and death is very personal as it touches the deepest parts of the human soul. The importance of confidentiality was recently raised by the Health Insurance Privacy and Portability Act, which mandated changes necessary to protect patients across the medical care system. Health affects one's life in all respects, determines how one interacts with others in society and dictates other's perception of a person. Moreover, an individual often maintains full use of his capabilities during the first stages of a terminal illness and thus that person should be protected from others' assumptions that he is already impaired.

Maintaining confidentiality becomes more complex in the case of LEP patients as a third party is involved to act as an interpreter. Thus, the simple physician/patient exchange becomes a three-way conversation. The patient's symptoms, disease and most personal characteristics are disclosed to the interpreter, who now bears the responsibility of maintaining the patient's confidentiality. A trained interpreter will realize the importance of the information he possesses, but the problem arises as had hoc interpreters are used. For example, it occurs that restaurant owners are called to interpret for patients when no communication is possible with the physician and no interpreter is available. Very often, no notice of privacy, disclosure of important information or advance directive to handle this confidential information is given to the restaurant owner in whom the patient's reputation rests.

Using family members and children as interpreters also creates problems with confidentiality as it imposes role reversals and crosses over family boundaries. For instance, in the case of a Chinese mother's visit to her physician with her 10-year-old daughter serving as the interpreter, how far can the physician go in asking specific questions about the patient's depression to assess the risks of suicide? Can the child be let to understand that mommy is thinking of killing herself? But at the same time, can the physician ignore further questioning and take the risk of his/her patient committing suicide when he/she could have prevented her death?[43] Obtaining informed consent and maintaining confidentiality are critical to the way we practice medicine and remain a crucial part of our medico-legal responsibility to the patient and to society[44]. Maintaining individual confidentiality is essential in the physician/patient encounter to protect the patient's rights and to foster trust in the relationship. In his role as teacher, the physician cannot ignore the patient's right to be taught about his disease while maintaining one's privacy. Therefore, trained interpreters should be used for LEP patients in order to ascertain rendering the best possible treatment and care.

In summary, the ethical principles of non-maleficence, beneficence, respect for autonomy and justice serve to highlight the ethical basis for providing interpreters for LEP patients. Taking into consideration the patient's rights and reexamining his duty to individuals will enable the physician to make appropriate decisions and will foster high quality patient centered care.

B.3 Case Study of Yale-New Haven Hospital: A Look at Interpreter Services:

Interpreter Services at Yale-New Haven Hospital was developed in 1995, as a sub-department of Volunteer Services and Patient Relations, as a need was identified to provide interpreters to a growing LEP population. The Interpreter Program was officially implemented in 1997 and in 1999, Yale-New Haven Hospital initiated a hospital wide interpreter training, education and advertising effort for employees, managers and volunteers. The interpreter services program is directed by a full-time interpreter coordinator, under supervision from the director of the Volunteer Services and Patient Relations Department. It currently employs one full-time and two part-time Spanish interpreters, as well as a full-time secretary/dispatcher. All other interpreters are adult volunteers (greater than 18 years old), coming from Yale College, Yale Medical School, various Yale Professional and Graduate Schools and the greater New Haven community. Additionally, many Yale-New Haven Hospital bilingual staff have been trained as interpreters.

The interpreter program also relies on two over-the-phone interpreting agencies to help handle requests: Language Line Services and OnLine Interpreters. Both Language Line and OnLine Interpreters offer 24 hour, 7 days a week interpreter services, thus enabling the hospital to provide interpreters for patients at all times. One phone number is used to request an interpreter from all units of the hospital.

The procedure to obtain an interpreter can be summarized in four steps: 1) Initiating the request; 2) Filling the request; 3) Dispatching the interpreter; and 4) Start of a three way conversation.

A request for an interpreter is initiated when a hospital staff member calls the Interpreter Services dispatcher. The dispatcher takes an array of information needed to fill the request (such as patient's name, language spoken and location of the unit where the interpreter is needed) and document the encounter for tracking purposes. Providers can initiate a request at any time and information on pre-scheduled requests may be left on a special voice mail at any time.

The criteria used in selecting a resource for filling any request depends on the language requested, the timing of the request, the urgency of the need, the flexibility and wishes of the provider and the volume of requests in the office at the time the request needs to be filled. The first goal is to provide in-person service if possible.

Once a decision is made about how to fill the need for an interpreter, the provider is called back and informed on how the need will be met. The fastest provision of an interpreter is met by an over-the-phone interpreter which takes between 30 seconds and 3 minutes to connect. The dispatcher places a call to one of the phone interpreting agencies, requests an interpreter for the patient's language and informs the medical staff that the interpreter requested is on the phone. If the in-person interpreter is present in the office, they will walk to the interpreting location within 5-10 minutes. If the interpreter must be sought out from the medical complex, the length of service delivery is dependent on the particular interpreter's availability.

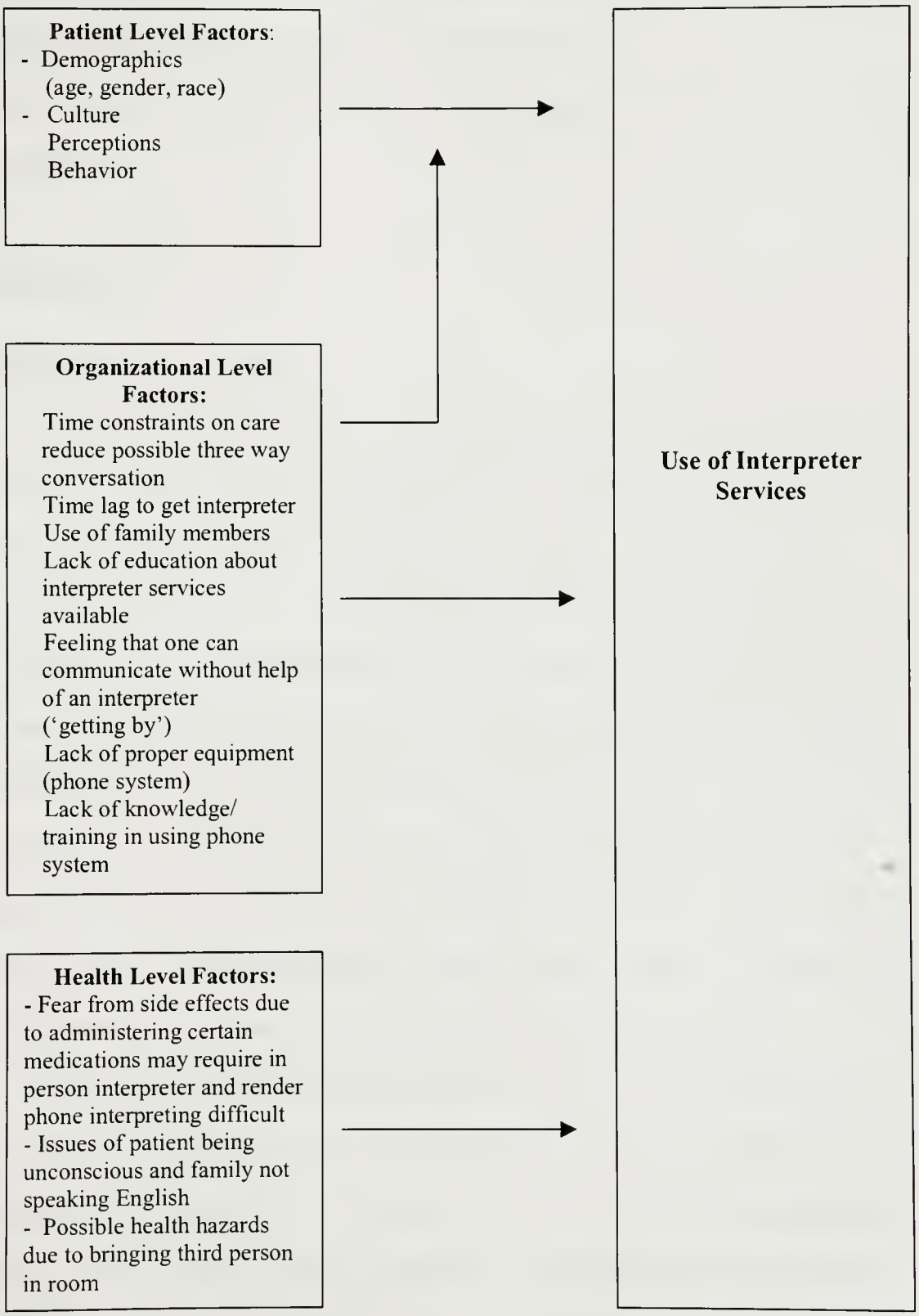
Once an interpreter arrives at the unit or is connected over-the-phone to meet with the patient and clinician, a three way conversation begins between the medical staff, the patient and the interpreter.

The use of one phone number to request an interpreter allows interpreting services to be streamlined through the YNHH Interpreter Services, which records all requests for interpreter by time of request, language requested, unit submitting the request and name of the patient. Requests are also recorded according to results of the interpretation, that is if it was completed, if it was initiated but not completed and the reason for non-completion and if the interpretation was completed by either Language Line Services or OnLine Interpreters. An in-person interpretation is defined as an interpretation conducted by a volunteer or staff interpreter from Interpreter Services at the hospital unit which requested the interpreter. In-person interpreters thus travel throughout YNHH to answer requests for interpretations. A phone interpretation is defined as an interpretation conducted though the phone either by a volunteer or staff interpreter answering from the Interpreter Services office at YNHH or conducted by an interpreter from Language Line Services or OnLine Interpreters. Phone interpretations conducted by interpreter volunteers or staff occur when no interpreters are present in the office to answer the request in person or when the interpreter coordinator is alone staffing the office and thus unable to travel to a YNHH unit to answer the request (one person must remain in the office at all times to answer interpreting requests).

Each hospital unit (but not procedure rooms and clinics) was given a speaker phone to use for phone interpreting in 1999 and staff members were trained in the procedures of using the speaker phones for interpreting. In person interpreters are present in the interpreter's office Monday through Friday, from 7:30am to 8pm.

II. Conceptual Framework:

Figure 1:



Three levels of factors seem to influence the use of interpreter services: patient level factors, organizational level factors and health level factors. This thesis will examine the organizational level factors which influence the use of interpreter services by looking in detail at the specific factors affecting the use of interpreters at Yale-New Haven Hospital (See Figure 1).

III. Methods:

A) Study Design and Sample:

This is a qualitative study, based on open-ended interviews conducted with clinical staff during visits at Yale-New Haven Hospital from November 2000 through January 2001. The qualitative approach was chosen for two reasons. First, few studies have investigated the use and barriers to use of healthcare interpreters for Limited English Proficiency (LEP) patients. Qualitative research is particularly well suited for exploratory studies for which previous literature is limited.[45] Such studies are useful for generating hypotheses that can later be tested with quantitative data.[40,46] Second, we anticipated that some factors, such as clinical staff and nurse manager's perceptions of the interpreter services available to them and of the use of interpreters in the delivery of care for LEP patients, may be multifaced and difficult to measure. Again, qualitative research provides a method for describing the diverse facets and dimensions of such factors.[40,47]

According to well-accepted qualitative research methods, study units were chosen using purposeful sampling to ensure that we included a diverse set of hospital units. Eligible hospital units were those that operated under the Yale-New Haven Hospital and had requested interpreter services in the past year. Hospital units were selected based on

review of the Interpreter Services Database data, which provided information on the number of requests for interpreters in the past year. Hospital units were selected to reflect a wide range of requests, from one request to 835 requests in the past year for interpreters. To ensure measurement across this wide range, hospital units were arrayed in three groups by number of requests for interpreters in the past year: those units recorded with under 30 requests for interpreters, those units between 31 and 99 requests for interpreters and those units recorded with more than 100 requests for interpreters. From each group, hospital units were randomly selected and asked to participate in the study. The nurse manager of the unit was contacted by phone and an interview time was scheduled. In-depth, open-ended interviews[40,48] were conducted in person with nurse managers or nursing staff described by nurse managers as key staff involved with requesting interpreters for the care of LEP patients. Hospital units were visited at all times during business hours as well as during nights and weekends, to ensure coverage of all health care staff member's interactions with interpreter services. Additional hospital departments were selected and visited in each of the three groupings until no new concepts were identified by the additional interviews, i.e., until the point of theoretical saturation. This occurred at 21 departments and 26 interviews.

B) Instrument:

A semi-standardized discussion guide with open-ended items, with probes for clarification and additional detail was used in the individual interviews. The discussion guide began with the standard "grand tour" question[49], " Can you tell me about your latest experience with the interpreter services?" Respondents were asked about their past

use of the interpreter services, their perceptions of the types of situations in which interpreters should be requested, difficulties they experienced with the interpreter services, as well as basic biographical questions. Questions used in the discussion guide included broad questions about the services such as: "In what situations do you call for interpreters?", "Have you ever had problems with reaching the interpreter services?", "Would you characterize the use of interpreter services in your unit as over-utilized, under-utilized or utilized in the right amount?, Why would you characterize it as such?". Other questions were more quantitative in nature such as "How many times did you use interpreter services in the last year?" and "How many times could you have used interpreter services in the last year but did not?" A further question asked the respondent to formulate ideas for better use of interpreters on hospital units, it explicitly stated "Do you have any additional comments on increasing education and the use of interpreters in the delivery of care?" The two final questions prompted respondents for their title or position as well as for whether they spoke any foreign languages and if they perceived this factor to influence their perception of interpreter services. In all areas of inquiry, respondents were encouraged to illustrate their experiences with specific stories or vignettes. (Refer to Appendix B)

C) Data Collection:

At least one key respondent was interviewed at each hospital unit selected for a total of 26 key respondents interviewed. These included 18 Patient Services Manager/Unit Directors, 7 nurses and 1 patient account representative. The Interpreter Coordinator was also interviewed about the history of the YNHH interpreter program and its current state.

Additional interviewees included the Director of the YNHH Diversity Committee, a unit of Human Resources, and the Performance Improvement Coordinator for Clinical Effectiveness, which provided additional general information on Interpreter Services use at YNHH.

Interviews were conducted with a single respondent or two respondents when they were able to complement each other's perceptions of their experiences with interpreter services. Interviews were typically 20-30 minutes in length. Interviewees were given an "Interpreter Quick Facts" sheet after each interview to thank them for their time and educate them about the interpreter services available (Appendix C).

Volunteer interpreters were also interviewed and asked about their experiences being called as an interpreter on the units, to assess their perceptions of the use of interpreters (Appendix D).

Interviews were conducted by a single researcher, a candidate for the Master of Public Health degree in Health Management at Yale University, School of Epidemiology and Public Health. All interviews were audiotaped and transcribed by the researcher. All research procedures were approved by the Human Investigation Committee.

D) Data Analysis:

D1. Quantitative Data:

Quantitative data was collected from the Interpreter Service request database. This database is managed by the Interpreter Services, and records each request for an interpreter. Every request for an interpreter generates a record that documents: (1) the name of the patient for whom the interpreter was requested; (2) the department requesting

the interpreter and its affiliation (meaning Hospital, Ambulatory Services or Yale Medical Group); (3) the language requested for interpretation; (4) the length in minutes of the interpretation; (5) whether the interpretation was conducted in person or by phone; and (6) the outcome of the interpretation (complete or incomplete). For phone interpretations the phone agency, Language Line Services or OnLine Interpreters that facilitated the request is noted.

Queries were conducted on the database to select all requests for interpreters by requesting department and affiliation made in the last fiscal year, from October 1, 2000 to September 31, 2001. Tables were then constructed to quantify the number of requests for interpreters by requesting department and affiliation (Hospital and Ambulatory Services). This quantitative data was also used to describe interpreter usage patterns among hospital units and used in sampling for interviews. (Appendix E)

Correlation coefficients were calculated to assess the association between the perceived number of requests made by units (as ascertained from the interview data) and the actual number of requests submitted by that unit (according to the Interpreter Services database) (Appendix F).

D2. Qualitative Data:

Transcribed data were analyzed using common coding technique for qualitative data[41,50] and the constant comparative method of qualitative data analysis.[40] Coding the data was accomplished in a series of two steps. The initial code list was established after review of all interview transcripts. Abbreviated topics and themes were written by the researcher on the margins on each transcript and passages were then organized by theme.

The researcher coded the data into a classification scheme and the final classification scheme was established through theme saturation, that is by noticing which themes were persistently apparent in the data. The initial code structure was then reviewed for logic and breadth by a second examination of all interview transcripts. The process of refining the code structure included adding and reconstructing codes as new insights emerged and identifying new relationships within units of a given category. A total of 25 specific codes organized within 3 broad themes were ultimately developed (See Appendix G) and served as the basis for the final text review and organization of the transcript data. This final version of the code structure was submitted to the researcher's thesis readers to ascertain the logic of the coding procedure. Each transcript was assigned a number by order of interview date for relevant quotes to correspond to a transcript as they were mentioned. Interview Report numbers range from 1 to 26 (IR1 – IR26). Finally, differences in themes were noted for high users (>100 requests for interpreters), medium users (31-99 requests for interpreters) and low users (<30 requests for interpreters) of interpreter services. Interview quotations were coded as High, Medium and Low according to number of requests for interpreters to analyze differences in perceptions of interpreter services among units.

Several techniques were used to ensure that data analysis was systematic and verifiable, as recommended by experts in qualitative research.[51] These included consistent use of the discussion guide, audiotaping, preparation of transcripts and standardized analysis of the data.

IV. Results:

A) Sample Description:

According to the Interpreter Services database, a total of 9,166 requests were made in the last fiscal year, with the highest number of requests in the months of August, September and October 2001 (Appendix H). This total number of requests in 2001 represents the highest number of requests since the inception of Interpreter Services and is a 25% increase from fiscal year 2000 (Appendix I). The breakdown of requests by units shows that 51% of the requests for interpreters were from hospital in-patients units, 12% of requests were from the emergency department, 18% from hospital clinics and procedure rooms and 19% from the Yale Medical Group clinics (Appendix J). A breakdown by language shows that 78% of the requests were for Spanish interpreters, 1-2% each for Arabic, French, Russian, Croatian, Mandarin, Turkish, Portuguese and Persian and the remaining requests were divided among 32 different languages (Appendix K).

B) Frequency of Use and Reported Use:

Of those who reported the number of times requests for interpreters were made in their unit (n=11), discrepancies were observed between the number of requests recorded in the Interpreter Services database and the number of interpreter requests the unit manager perceived to have been made from his/her unit. The mean number of requests for interpreters according to the Interpreter Services database was 75.72 requests (s.d.=60.71). The mean perceived number of requests for interpreters was 25.72 requests (s.d. = 56.2). Most (90%) units reported that they had requested interpreters less often

than was recorded in the Interpreter Services database (Appendix F). The mean difference in perceived versus actual requests was 50 requests (s.d = 53.69).

C) Key themes concerning Interpreter Services Use:

A total of four key factors were extracted from the transcripts, which were used to organize the interview data (Table 1). These include (1) use of interpreter services (composed of perceived appropriateness of current use and desired use of Interpreter Services); (2) determinants of interpreter services use (composed of perceptions, previous use and knowledge); (3) recommendations for increasing the use of interpreters (composed of staff education and training, publicity and awareness and structural changes); and (4) contextual factors (composed of sporadic nature, easy to forget procedures and inability to predict need). The illustrative quotations presented are selected from a large number of similar statements from the transcripts and reflect the clinical staff's perceptions of the current state interpreter services as well as their input on the desired state of interpreter services.

Although much variability was found among the factors and their dimensions described above, some consistencies were apparent among the interviewees. A majority of the respondents reported that interpreters were under-utilized on their unit, thus prompting comments on their perception that the use of interpreters could be increased on the unit. In most situations, interpreters are used to translate medical information and to ensure understanding of care and treatment, but not in day-to-day interactions with the patients. Few units reported using Interpreter Services for discharge procedures.

Despite these consistencies, there was ample variability in description of Interpreter Services across units. This variability obtained between units and respondents was characterized by the taxonomy of common themes identified from the respondents in Table 1.

Table 1: Taxonomy of Common Factors, Dimensions and Themes

Factors	Dimension	Themes
1. Use of Interpreter Services	1.1 Perceived appropriateness of current use of Interpreter Services	Staff beliefs
		Volunteer beliefs
	1.2 Desired use of Interpreter Services	Staff beliefs
		Volunteer beliefs
2. Determinants of Interpreter Services Use	2.1 Perceptions of Interpreter Services	Need for or added value of Interpreter Services
		Availability of Interpreter Services
		Timeliness of service
		Convenience of Interpreter Services
		Impact on quality of care
	2.2 Previous Use of Interpreter Services	Habit
		The sentinel event
	2.3 Knowledge concerning Interpreter Services	Awareness that Interpreter Services exists
		Awareness that Interpreter Services can be provided by the phone system
3. Recommendations	3.1 Staff education and training	Educational Seminars
		Computer Based Training
		Training Demo and Video
	3.2 Publicity and awareness	Flyers/Posters about interpreter use
		Distribute memos/brochures to clinical staff
		Publish articles in Bulletin
	3.3 Structural changes	Computer changes
		Data feedback
		Availability of listings
4. Contextual Factors	4.1 Sporadic Nature of Interpreter Services	N/A
	4.2 Easy to forget procedures to use Interpreter Services	N/A
	4.3 Inability to predict need for interpreters	N/A

C1. Use of Interpreter Services:

Use of Interpreter Services represents a major factor, composed of 2 dimensions: 1.1 Perceived appropriateness of current use of Interpreter Services; and 1.2 Desired use of Interpreter Services. Both dimensions are then subdivided according to staff beliefs and interpreter beliefs about the current and desired use of Interpreter Services.

C1.1 Perceived appropriateness of current use of interpreters:

Perceived appropriateness of the current use of Interpreter Services was described by both clinical staff and volunteer interpreters at YNHH.

C1.1.a Staff Beliefs:

In providing care to patients, clinical staff demonstrated a reluctance to increase use of Interpreter Services as they perceived the current use of interpreters on their unit to be appropriate. Clinical staff also reported competing priorities in providing care to patients, which affected their use of interpreters. Some bilingual respondents perceived that Interpreter Services was underutilized since the bilingual employees were often used instead of a professional interpreter.

> "[The unit manager] knows that staff is supposed to call for interpreters anytime a patient does not speak English, but in reality, nurses call when they can't communicate. Nurses try to communicate by all means, body language and gestures, before they call for an interpreter. Also we have some staff on the unit that are bilingual, but have not gone through interpreter training… in the case of informed consent, if the patient agrees with a family member, I [unit manager]'ll sign the papers" (IR 7, Medium)

> "Nurses are affected by a nursing shortage and sometimes are just trying to stay afloat so some things do not get the attention that they deserve" (IR 8, High)

> "We had one incident where a Spanish speaking employee was asked to interpret that there was no fetal movement of the mother's child and she [the employee] was very upset because she did not feel she should be interpreting for medical conditions." (IR 22, Low)

C2.1.b Volunteer Interpreter Beliefs:

Interpreter volunteers noted that nurses on the floors did not know where to direct interpreters when they came on to the units, thus reflecting the clinical staff's perception that interpreters add little value to patient care. Other interpreters reported that their relationships with the clinical staff and patients were good. Interpreters also mentioned that they are not called on by units many times during the night shift, and that the clinical staff uses people with very little experience in languages as interpreters instead of calling volunteer interpreters. Some quotes illustrate these concepts:

> "Nurses do not know where to direct me when I get to the floor." (IR Int.1)
>
> "I am well greeted by clinical staff when called to interpret and I have good interactions with the staff and patients." (IR Int.3)
>
> "Nobody calls for me to interpret and that is frustrating because I wait but do not feel that I am useful. Once I went on call but the patient had already left. The clinical staff uses people with very little experience as interpreters (1 year of high school Spanish)." (IR Int.2)
>
> " It is hard to see what the needs for interpreters are. Interpreters are underutilized on the night shift." (IR Int.2)

C1.2 Desired Use of Interpreters:

The desired use of Interpreter Services was noted as the second major theme of the Use of Interpreters factor. It is composed of staff beliefs and interpreter beliefs on desired use of Interpreter Services at YNHH.

C1.2.a Staff Beliefs:

Several staff beliefs were described concerning the current use of Interpreter Services. First, staff stated that creating and maintaining strong relationships between interpreter services and hospital units was mentioned as an important factor to increase the clinical

staff's trust in interpreters and might increase interpreter requests. Second, staff believed that the use of interpreters should be expanded to include LEP patients who speak a little English but do not comprehend finer medical concepts in order to communicate effectively with patients. Finally, staff believed that units should encourage the use of interpreters by setting standards for use and teamwork around patient care. The following excerpts from the interviews illustrate these points:

> "Once the staff knows you, they will call you for help when an LEP patient comes. It is more about building relationships to put in the head of the staff the need to call interpreter services." (IR 17, Low)
>
> "If the interpreter coordinator or someone from her department came to speak to departments on a more regular basis, that awareness alone would heighten the consistency that we have to use the interpreter services." (IR 4, High)
>
> "We need to use more interpreters for middle ground people who just get by but do not have a complete understanding." (IR 20, High)
>
> "Interpreters are necessary. Medical staff may miss effective communication with parents who pretend to understand and say yes but do not perfectly understand all the discussion." (IR 19, Medium)
>
> "Communication on the unit ensures that interpreter Services is used right, abiding to the unit policy and training makes the staff aware of the service and its good use." (IR 14, Medium)

C1.2.b Volunteer Interpreter beliefs:

Several beliefs were described by volunteer interpreters regarding the current use of interpreters at YNHH. Volunteer interpreters expressed the need for interpreters to be used more on the night shift, as they are available for clinical staff to call upon. Other interpreters noted that the current use was good and that they were called upon to interpret frequently, even on the night shift. The following quotes illustrate this point.

> "Interpreters are underutilized on the night shift" (IR Int.2)

> "I am called to interpret every time I am on shift and I volunteer for the night shift. I have nice interactions with the staff and do not have to wait." (IR Int.3)

C2. Determinants of Interpreter Services Use:

The factor 'determinants of interpreter services use' included three dimensions: perceptions of interpreter services, previous use of interpreter services and knowledge concerning interpreter services. These parameters and perceptions impacted the clinical staff's use and request patterns for interpreters.

C2.1 Perceptions of Interpreter Services:

Perceptions of Interpreter Services use fall into five categories. These include need for or added value of Interpreter Services, availability of Interpreter Services, timeliness of the service, convenience of Interpreter Services and impact on quality of care.

C2.1.a Need for or added value of Interpreter Services

Respondents noted their perceived need or perception of the added value of interpreter services as a major dimension affecting their use of Interpreter Services. In many cases, clinical staff's perceptions indicated that interpreters were not needed in the care process and that using interpreters was not perceived to add value to patient care. The following quotes illustrate this theme.

> "Nurses are not aware of the need to provide interpreter services." (IR 2)

> "Some units believe that no interpreters make any difference for patient care and underutilize interpreters. [The feeling is that] this patient is confused and it would make no difference whether we use an interpreter." (IR 3)

> "Nurses get caught up in a lot of things and calling for an interpreter always becomes a low priority until an issue arises. Using an interpreter is not perceived as a need if the staff can communicate and interpreter services is viewed as a low priority. Using family members is more convenient." (IR 7, Medium)

"Some people just do not take that extra step, they think that the little that goes through is enough because the mom has family support, which is not the right way to do it." (IR 8, High)

"Therapists go in a room to meet with a patient without knowing the patient's language and if this is the only time they have to meet with the patient, they might elect not to use interpreter services if they can get their point across with gestures." (IR 9, Low)

"The staff has good expectations, they expect to get fast interpreters for common languages such as Spanish because it represents a big portion of the population but for languages like Russian, the staff is willing to wait longer for an interpreter." (IR 10, Medium)

"The way you view patient care is the way you view interpreter services. Patient friendly services need to include communication with patients." (IR 12, Medium)

"The unit has no need for interpreters as we do not have any patients who need interpreter services." (IR 18, Low)

"We have not been using the speakerphones a lot. Staff nurses and PCAs speak Spanish and we use them as interpreters. Some of the doctors also speak Spanish so we use them directly as interpreters. There is no big need for other languages. In case of an emergency, we use interpreter services". (IR 23, Low)

"For the day-to-day stuff, the unit has several nurses who speak Spanish. To ask if a patient is in pain or to explain their medication, we use nurses. If no staff nurse is around, we will call the interpreter services. I have never used speakerphones and do not know if the unit has one." (IR 24, Low)

C2.1.b Availability:

Perceived availability of interpreters was considered as a major issue in determining the use of interpreters at YNHH. The inability to request an interpreter after work hours was noted as a barrier to using interpreters. Additionally, the unavailability of interpreters to come to the units when requested was mentioned by clinical staff, as well as the perceived need for more full-time interpreters.

"We could have used interpreters and did not in the past year because it wasn't available. If it's after hours or on the week ends, we can't reach the interpreter's office." (IR 6, Medium)

"It's harder to get interpreters on the night shift, but it is helpful to now have people in the office from 4-8pm." (IR 10, Medium)

"In certain occurrences, interpreters are not available and since physical and occupational therapy are not life and death situations, they try to schedule for patients who need interpreters in advance. If no interpreter is available, the unit will use staff members" (IR 9, Low)

"There are not enough interpreters available." (IR 25, Medium)

"No problems reaching Interpreter Services. The problem has been in whether they have the language needed at the time needed." (IR 20, High)

"Some units use the speakerphones and they really like it. In the areas that have been using it the most and got used to it, it is working very well. A couple of areas were more resistant to use it, especially areas which work around the clock. It was difficult to get the night staff to use the phone services and get them in the routine of using it because it takes a little more time." (IR 20, High)

C2.1.c Timeliness of service:

One of the most frequently expressed concerns about using interpreter services has been the perception that requesting an interpreter imposes time constraints on clinical staff members. Respondents reported that they experience a long time lag to obtain an interpreter on their unit once they submit a request for an interpreter and that in emergency situations, waiting for an interpreter is not possible. Moreover, waiting for an interpreter before proceeding with the patient interaction will disturb clinical staff schedules and they will either be late for all other appointments, not be able to spend the necessary amount of time with the LEP patient or will have to work overtime to finish seeing all their appointed patients. Some clinical staff members also perceive that the phone system does not work well for interpreting. Finally, perceptions exist that

obtaining an interpreter is slow and inefficient because the system used by interpreter services at its implementation a few years ago was slow and perceptions have not changed towards the new and faster system. A series of quotes illustrate this theme.

> "Interpreters won't get there fast enough" (IR 3)
>
> "Problems with having to reschedule interpreters because some patients go into dialysis unexpectedly and the physician has to reschedule but is not always able to get an interpreter" (IR 9, Low)
>
> "Therapists have to see between 12-14 patients a day and most patients take between a half hour and an hour. With cancellations, therapists can get done within the 8-hour day but if they wait for an interpreter for 20 minutes and fall behind in their schedule, they end up working at night. There have been instances were therapists have waited 15-20 minutes for an interpreter and they loose that time." (IR 9, Low)
>
> "It is easier not to use interpreters because of time constraints and use of family members. Hard in process of care to stop at each patient and require interpreter or proceed slower because the process with an interpreter is slower" (IR 12, Medium)
>
> "In trauma, unplanned nature of services makes if difficult to plan for interpreter requests. Physicians want informed consent 'now' and do not like to wait for services. Interpreters have to understand that unit can't plan for need and unit has had some interpreters frustrated when patients or physicians were not there when interpreter was waiting because another trauma occurred at the same time." (IR 21, Medium)
>
> "If the doctor is doing a circumcision, or putting in an IV, we use staff as interpreters because we want to be sure the patient understands what is being done versus having to call interpreter services and waiting for an interpreter to be connected." (IR 12, Medium)

C2.1.d Convenience of Interpreter Services:

Convenience or lack of convenience was also raised as an issue in using interpreters at YHNN. Finding a bilingual person who is already present on the unit to speak with a patient was mentioned as "more convenient" than submitting a request for an interpreter. Clinical staff tends to use whoever is closest as an interpreter (bilingual clinical staff,

patient's family members or friends) versus requesting an interpreter. Additionally, bilingual clinical staff is perceived better than interpreters because they know the medical terminology. The following quotes reflect concerns with convenience when using interpreter services:

> "It is easier to use family members because they are here." (IR 3)
>
> "It is easier to use staff members as they can answer questions directly as they provide care and have a two-way versus a three-way conversation with patients." (IR 19, Medium)
>
> "Have speaker phone on the unit but as with any piece of equipment, we have a terrible time trying to keep track of it. One phone has not been enough on certain occasions where staff has had to run from one patient's room to the next with the phone." (IR 21, Medium)

C2.1.e Impact on quality of care:

Respondents reported that the quality of services provided by Interpreter Services was high and that it played a role in good patient care. Respondents noted that the use of interpreters might increase with the comfort of seeing them at work with patients. Additionally, staff reported that positive experiences with interpreters provided a confirmation of their role in the enhancement of quality of care. The following quotes reflect clinical staff's comments on the adoption of interpreter services:

> "I [respondent] use the ATT LanguageLine phone system the most and it works very well. I call in the request to the interpreter's office which instantaneously puts me through to the phone system. I use interpreter services everyday." (IR 5, High)
>
> "The last time I called for an interpreter was for a Polish speaking patient. The nurses and doctors were in the room with the patient in the bed and the interpreter on the phone though LanguageLine. The service was very good." (IR 7, Medium)
>
> "We used interpreter services last week for a patient from Laos. It was initiated by the pediatrician, who set up the phone system and the interaction was wonderful. The interpreter on the other line was excellent, very patient and helpful. This

> patient could not understand a word of English and it would have been unsafe to have this mom and baby go home without the services. The patient smiled throughout the whole interaction because things were finally clicking and made sense to her." (IR 8, High)
>
> "I [respondent] was not familiar with the phone system 2 weeks ago, but I realized that the patient seems so much more comfortable with having someone who speaks her own language. When I use interpreters, the patient smiles throughout the whole conversation, [something] which we do not see with family members." (IR 8, High)
>
> "We use staff members instead of interpreters because it is quicker, more convenient, increases patient satisfaction because a nurse who speaks the same language as the patient can be there for the whole day through to care for them". (IR 14, Medium)
>
> "The unit uses the phone system, which is very good. Using the phone is faster and better. However, we have to do more explaining on the phone, as the interpreter is not there in the room to see what is happening." (IR 15, Medium)

C2.2. Previous Use of Interpreter Services:

Previous use of Interpreter Services was noted as a dimension of the determinants Interpreter Services use. Previous use of Interpreter services included the themes of habit and the sentinel event as factors in the use of interpreters.

C2.2.a Habit:

Submitting a request for an interpreter is a new process for many of the clinical staff, as the Interpreter Services program was started at YNHH only 6 years ago, and thus using interpreters in delivering care is not part of the established habits of clinical staff. While some respondents viewed using interpreters as providing higher quality care for patients, some of the clinical staff at YNHH seemed unaware of the importance of using interpreters to communicate with LEP patients. The following quotations illustrate this point:

> "[Using interpreters] is not in the customs or norms of nurses so it is not on their radar screen when treating patients." (IR 2)
>
> Using interpreters "requires a change of practice over the past couple years but it is still hard to break old patterns". (IR 20, High)
>
> "People immediately say that's not good patient care, until they try it. It can be very difficult to get, especially old school people who are used to doing it differently, to try this new system." (IR 20, High)

C2.2.b The Sentinel Event

One bad experience or a deviant case with using interpreter services seemed to greatly influence the repeat use of interpreters. Instances in which a patient care unit experienced an interpreter not transmitting exactly what the doctors or nurses were telling the patient or instances when interpreters were not immediately available left a lasting impact on the clinical staff, who was less likely to use interpreters on a subsequent occasion. Some examples of the repercussion of these bad experiences are illustrated in the quotes below.

> "The last time we used an interpreter from interpreter services, the unit experienced a problem with an interpreter who wasn't conveying to the patient what the doctor and nurses were saying. The interpreter was edging the patient on and giving different information to the patient than what the medical staff was saying. After that bad experience, the unit was reluctant to work with interpreter services." (IR 6, Medium)
>
> "If it was difficult to get an interpreter for one time, the therapist might not be inclined to reschedule it because they have so many other things to do". (IR 9, Low)
>
> "I was involved in a patients relations issue dealing with Online Interpreters services because what the interpreter was translating from the doctor to was different from what was said, as noticed by the bilingual daughter at the bedside." (IR 17, Low)
>
> "Last experience with interpreter services, we used the speakerphone and there was a miscommunication with the nurse. The nurse thought somebody was coming up to the floor, not knowing she had been tied up to an interpreter over the phone from Chicago. The unit ended up with a long distance bill because the

> interpreter was left on hold. The nurse did not realize that the interpreter was on hold." (IR 23, Low)

C2.3 Knowledge:

Knowledge concerning the use of Interpreter Services was noted as a determinant of Interpreter Services use. Knowledge gaps were apparent in 2 areas: awareness that Interpreter Services exists and awareness that Interpreter Services was be provided by the phone system.

C2.3.a Awareness that Interpreter Services Exists:

The lack of awareness on the units about interpreter services and the use of interpreters presented itself as a major reason for the reduced utilization of interpreters. Knowledge gaps were apparent in several areas. For instance, several staff members lacked awareness about the existence of Interpreter Services. The following quotes illustrate this theme:

> "There are information barriers for staff to use interpreters. Do not know how to use the services so the nurse manager can't get the message out to the staff. Also, the new staff coming in needs to be aware of that interpreter services exists and trained on how to use it." (IR 6, Medium)

> "Interpreter Services is underutilized because people don't know that it's available, and there is a need to educate more people about it." (IR 6, Medium)

> "Interpreter Services is underutilized in the unit due to a lack of awareness about the services." (IR 25, Medium)

C2.3.b Awareness that Interpreter Services can be provided by the phone system:

Several staff members lacked awareness about the availability of phone interpreting and about using the phone system for interpreting. Clinical staff that did not have much experience using phone interpreting expressed preferences for in-person interpreters

versus over-the-phone interpreters. The following quotes provide examples for this theme.

> "Most staff do not know how to use the phone [interpreting system]. They need to get some assistance to use the phone. One staff member will be called to help others to call or call the administrative coordinator who helps put the equipment in place." (IR 10, Medium)

> "Staff does not know how to use speakerphones, does not know where the phone is and how to call an interpreter. It creates an access issue as the staff does not know how to use the equipment." (IR 17, Low)

> "We use interpreter services when we need too. We get someone in house if we can. We would rather use a person directly than use the speakerphone." (IR 23, Low)

> "I don't know about speakerphones and AT&T languageLine. I have not used speakerphones and do not know if the unit has one, I've never used that service." (IR 24, Low)

> "The unit uses Interpreter Services just a right amount, we use interpreters when we need them. The unit does not use the speakerphone system." (IR 26, Low)

> "The unit has not used the AT&T LanguageLine service because sometimes it is not available in the language needed. We might not have an interpreter AT&T phone line." (IR 6, Medium)

> "Using the phone system is not convenient, as staff members do not know how to use the phone or where to get it from." (IR 25, Medium)

> "It is better to have face to face contact with the interpreter because we understand and communicate better at the bedside" (IR 19, Medium)

C3. Recommendations suggested by participants for increasing the use interpreters:

Recommendations for increasing the use of interpreters at YNHH were given by all respondents. These recommendations fall into 3 major themes: 1) staff education and training; 2) publicity and awareness; and 3) structural changes.

C3.1 Staff education and training:

Staff education and training was composed of 3 themes: a) Educational seminars, b) Computer based-training, and c) Training demo/video.

The importance of continuous education on using interpreter services was a major point raised during clinical staff interviews. Reminders and refreshers on requesting interpreters and using the speakerphone systems were mentioned to be needed periodically in order to maximize use of the services. Many respondents provided direct insight as to how education about interpreters and the use of interpreters could be increased within their unit. The first set of recommendations targeted training programs and nurses education. These recommendations involved:

C3.1.a Educational Seminars:

- Providing educational seminars for interpreter use, either by way of in-servicing or sponsored by the nurse education department;
- Including interpreter training for new employees at YNHH;
- Providing a step-by-step instruction sheet on how to use speakerphones that can be kept by the phones.

The following quotes illustrate these points:

> "We need to keep pushing for the use of interpreters, for more education and reminders and get back to departments when you find a situation where they should have used an interpreter. If we reminded people more frequently, we would increase the consistency of the use of interpreters and the awareness that they are there." (IR 4, High)

"Make interpreter training a yearly competency requirement, so people will be freshly trained." (IR 7, Medium)

"Nursing education could orchestrate an in-service information session for the staff about interpreters." (IR 8, High)

C3.1.b Computer Based Training

- Including interpreter requesting procedures in the Computer Based Training (CBT);

The following quote illustrates this point:

"Integrate interpreter training in CBO (Competency based manual attached to the unit). We would need to have the staff sign off when they completed training so the nurse manager would know that the staff acquired skills to use interpreters." (IR 6, Medium)

C3.1.c Training demo/video:

- Showing videos on patient care and use of interpreters in units during lunchtime and breaks that nurses signoff on after seeing
- Providing a training demo in the conference room to orient different shifts to using interpreters

The following quote illustrate these points:

"To orient different shifts to using Interpreter Services, a training demo could be left in the conference room and staff can go in to see the demo and read what to do." (IR 8, High)

"Education about the use of interpreters could be done by showing a video on patient care in units during breaks or lunch and have nurses sign off when they watch it." (IR 2)

C3.2 Publicity and awareness:

Respondents recommended increasing awareness of the importance and use of interpreters by promoting interpreter services through publicity by way of the marketing department at YNHH. These recommendations for increased exposure of staff to

interpreter services included 3 themes: a) Flyers/Posters about interpreter use; b) Distribute Memos/Brochures to clinical staff on interpreter use; and c) Publish articles on Interpreter Services in the YNHH Bulletin.

C3.2.a Flyers/Posters about interpreter use:

The dissemination of flyers and posters on units around YNHH was mentioned as an effective means of educating clinical staff about the use of Interpreter Services. Having flyers or posters with the Interpreter Services phone number directly available to the eyes of the clinical staff was also mentioned as a factor that would increase the use of interpreters as it would act as a daily reminder that the service is available. Some of the specific recommendations included:

- Displaying posters about interpreting and the services offered, targeting both staff and patients
- Posting interpreter services flyers in patient's lounges to educate them about the services available

The following quotes illustrate these points:

> "Put up posters in units about Interpreter Services." (IR 6, Medium)
>
> "Make signs about Interpreter Services to make people aware of the service." (IR 10, Medium)
>
> "Put flyers in patient's rooms about interpreters so patients are aware that interpreters are available, so patients in the beds can communicate to the staff that English is not their native language." (IR 21, Medium)
>
> "Make a color flyer with instructions on calling Interpreter Services to post on the bulletin boards in the nurse's office." (IR 19, Medium)

C3.2.b Distribute memos/brochures to clinical staff on Interpreter Use:

Distributing memos or brochures about Interpreter Services use and procedures was mentioned as providing a reminder to clinical staff of the availability of Interpreter Services. Reminders about the use of interpreters were noted as an important determinant of the use of interpreters as the procedure to request an interpreter is easy to forget and the service is used sporadically. Moreover, the use of interpreters was cited as increasing significantly directly after a refresher session and as decreasing proportionally with time lags between refresher sessions about using Interpreter Services. Specific recommendations mentioned include:

- Distributing brochures to each unit describing the use of interpreters
- Providing flyers on interpreter use in medical staff mailboxes;
- Providing brochures about using interpreters in new hire training folder

The following quotes illustrate these points:

> "Putting flyers in people's mailboxes twice a year is a good reminder. When you don't use the service very often, you forget how to use it so it's good to have reminders" (IR 23, Low)

> "Keep educating periodically that we can't use anyone as an interpreter. It could be done through providing written materials." (IR 21, Medium)

C3.2.c Publish articles about Interpreter use in the YNHH Bulletin

Including newsflashes about interpreter services in the bulletin and hospital publications was mentioned as an effective means of keeping clinical staff informed of the availability of interpreters at YNHH and of the procedures to request an interpreter for an LEP patient. The following excerpt from interviews with clinical staff reflects this theme:

> "A way to increase education about Interpreter Services is to publish articles in the Bulletin." (IR 20, High)

C3.3 Structural Changes:

Respondents mentioned that structural and organizational changes could be made to increase the use of interpreters among clinical staff. These recommendations include a) Computer changes; b) Data Feedback; and c) Availability of listings.

C3.3.a Computer Changes:

Computer changes were mentioned as a structural change that would increase the use of interpreters by creating a check and balance system as well as an information source for clinical staff about using interpreters. Specific recommendations include:

- Creating computer prompts on patient's language screens to remind nurses to call interpreter services
- Provide the phone number for requesting an interpreter on the nursing computer database (CCSS)

The following quotes illustrate these points:

> "Computer prompts which asked for patient's primary language when a patient is entered in the computer could send a prompt on the screen to the nurse to remind her to call interpreter services if the primary language is not English. The nurse would have to call in an interpreter before she could proceed with a patient's account so that it would become a necessary step in the care process." (IR 7, Medium)

> "Use reminders on computer screens (nursing database) with the phone number for interpreter services so that nurses have more exposure to the number and are reminded of the service." (IR 12, Medium)

C3.3.b Data Feedback

Providing data feedback such as a quarterly report for Patient Service Managers detailing the use of interpreters by unit was described as a means of increasing awareness and education about the actual use of interpreters by each unit. Moreover, making interpreter services a yearly competency requirement was mentioned as a means to

provide data to the Patient Services Managers of their staff's appropriate knowledge of the procedures necessary to request an interpreter. The following quotes illustrate these points:

> "Provide nurse managers with information on their staff's requests of interpreters so they know whether they need to educate their staff. Quarterly reports of interpreter use by unit would provide good information to unit managers." (IR 3)
> "Give managers a report of how much they use the service and if their use is adequate by unit." (IR 7, Medium)

> "Making interpreter training a yearly competency requirement (annual training like CPR), would increase interpreter utilization because people would be freshly trained." (IR 7, Medium)

C3.3.c Availability of Listings

Maintaining available listings of bilingual staff members and of the phone number needed to request an interpreter was mentioned as part of the structural changes which would increase the use of interpreters. Creating a list of bilingual staff by language spoken and work unit appeared to be particularly useful in case of an urgent need for an in-person interpreter that could not be met by Interpreter Services. This listing would be especially important for the night shift, during which time an in-person interpreter might be needed but is not available from Interpreter Services. Secondly, adding Interpreter Services' phone number to the important numbers list in units was mentioned as a factor in providing direct access to Interpreter Services as well as a reminder that the service is available. The following interview excerpts illustrate these points:

> "It would be helpful to have a list of bilingual night staff and what floor they work on so that night nurses could get an interpreter if they needed to." (IR 10, Medium)

> "Add Interpreter Services' phone number to the most called numbers list on the unit." (IR 19, Medium)

C4. Contextual Factors Influencing the Use of Interpreter Services:

Respondents mentioned several contextual factors as influencing the use of interpreters in units. The sporadic nature of need for interpreters was noted as a variable in the continuous and timely use of interpreters. An unfamiliarity with requesting an interpreter and using the phone system can be explained by the fact that the procedure for requesting an interpreter is easy to forget because it is not used very often by all clinical staff members. Additionally, the inability to predict the need for interpreters renders scheduling of the service very difficult for both clinical staff and Interpreter Services. Moreover, the unpredictability of services needs further accentuates the difficulty of providing interpreters for the patient's language when requested. Building strong relationships between Interpreter Services and the clinical staff was mentioned as a potential solution to dealing with these contextual factors by creating an atmosphere of trust among staff members. The following quotations illustrate these points.

> "The problem with interpreter services is that it's not a service that you use all the time and if you're a part time person and haven't used it for 4 weeks, you don't remember the number off hand and just make a guess." (IR 21, Medium)

> "Since it [requesting interpreters] is something you do so infrequently, you do not remember how to use it." (IR 10, Medium)

> "The problem with using interpreter services is that you don't always have the ability to plan for it. You can get patients from the ED who need an interpreter in the spur of the moment. Also, in trauma, there are more unplanned admissions than planned." (IR 21, Medium)

D. Differences in Perception among high, medium and low Interpreter Services using units

Perception differences were noted among high (n=5), medium (n=9) and low (n=7) interpreter user units as identified by the most recurring themes mentioned by the respondents. Among these different types of units, these perception differences were organized according to the factors, dimensions and themes mentioned previously.

Issues commonly mentioned in low user units and not mentioned by respondents from high units included: 1) use or added value of interpreter services; 2) timeliness; 3) the impact of a sentinel event (bad event); and 4) the awareness that interpreter services can be done by phone.

Respondents from the low user units often reflected that Interpreter Services offered little added value and that Interpreter Services took a long time to respond to requests. Further, these units typically mentioned having had a sentinel event (bad event) or being unaware that Interpreter Services can be done over the phone. These issues were not reported in high user units and only very seldom in the medium user units.

Perception that Interpreter Services offered little added value:

> "Since some staff speak Spanish, we use them directly. Physicians do examinations in Spanish, if the doctor speaks Spanish there is no need to bring in an interpreter. We would call for an interpreter if no staff member is available". (IR 23)

Perception that Interpreters Services takes a long time to respond to requests:

> "Interpreter Services always makes you aware that it might take up to an hour to get an interpreter on the unit so you have to try to anticipate when you will need an interpreter. Sometimes nurses are in the moment and need to manage many things fast so they don't have time to call for an interpreter". (IR 24)

Mention of a sentinel event:

> "Last experience with interpreter services, we used the speakerphone and there was a miscommunication with the nurse. The nurse thought somebody was coming up to the floor, not knowing she had been tied up to an interpreter over the phone from Chicago. The unit ended up with a long distance bill because the interpreter was left on hold. The nurse did not realize that the interpreter was on hold." (IR 23, Low)

Awareness that Interpreter Services can be provided by the phone system:

> "I have not used speakerphones and do not know if this unit has a speakerphone. I have never used the phone service to provide interpreting services." (IR 24)

Issues commonly mentioned in high user units and not mentioned in low or medium units included: 1) habit; 2) education and training; and 3) knowledge.

In contrast, high users but not medium or low users reported using Interpreter Services as part of their standard practice, suggesting the theme of "habit". For these units, the use of interpreters in the provision of care to LEP patients was embedded in their standard of care. In addition, high users did not discuss any dimensions concerning knowledge about Interpreter Services whereas medium and low users did. High users recommended education and training as a means to increase use of interpreters at YNHH but did not mention publicity or structural dimensions as recommendations to increase the use of interpreters as did medium and low users.

Habit (a theme of the previous use of Interpreter Services dimension):

> "As we do refresher trainings, consistency rises in the use of interpreters and as we don't talk as much about the program, staff becomes more inconsistent." (IR 4)

Education and training:

> "Nursing education could orchestrate an in-service information session for the staff about interpreters. We need to provide more education so people catch on". (IR 8)

V. Discussion:

The use and determinants of use of Interpreter Services at YNHH varied by unit. This variability could be classified by a common set of dimensions as displayed in the taxonomy of common factors, dimensions and themes. The four factors identified were 1) Use of Interpreter Services; 2) Determinants of Interpreter Services use; 3) Recommendations; and 4) Contextual factors. Key themes in determinants of Interpreter Services use include 1) Perception of Interpreter Services; 2) Previous use of Interpreter Services; and 3) Knowledge about Interpreter Services. Within the dimension of the perceptions of Interpreter Services, substantial differences were apparent in terms of 1) Need for or added value of Interpreter Services; 2) Availability of Interpreter Services; 3) Timeliness of service; 4) Convenience of Interpreter Services; and 5) Impact on quality of care. Within dimension of the previous use of Interpreter Services, differences were apparent in the themes of habit and of the importance of a sentinel event. Within the dimension of knowledge concerning Interpreter Services, differences were observed in terms of the awareness that Interpreter Services exists and that the service is available over the phone. Key themes pertaining to the factor of the recommendations mentioned by respondents include 1) Staff education and training; 2) Publicity and awareness; and 3) Structural changes. These recommendations will provide a basis for the design of an action plan to increase the use of Interpreters at YNHH.

The findings reported here from on-site, in depth interviews provide both detail and insight into the use and factors affecting the use of interpreters at YNHH. These findings suggest that the number of requests for interpreters might be underestimated by unit managers and that the need for interpreters is greater than perceived among hospital units.

Additionally, low users of interpreters reflected on different factors influencing their use of interpreters than did the high users. Low users' perception that Interpreter Services provided little added value and took a long time to respond to requests for interpreters might explain their resistance to requesting interpreters from Interpreter Services. Low users also reported needing additional knowledge concerning Interpreter Services, especially in their use of the phone system perhaps explaining their reluctance to using phone interpreting. Last, low users' experience of a sentinel (bad) event seemed to greatly affect their subsequent use of Interpreter Services. This fact suggests that attention should be devoted to providing only positive experiences to units which request interpreters, as clinical staff's future interpreter request patterns seem directly influenced by their experience with the services. The mention of habit as a factor of use of interpreters by the high users reinforces the need to provide top quality services, as clinical staff reflected that their pattern of requests for interpreters had increased by seeing interpreters at work and becoming familiar with the procedures for interpreting.

These results confirm the importance of organizational level factors, outlined previously in the conceptual framework (Figure 1), in influencing the use of Interpreter Services. The numerous specific organizational factors influencing the use of Interpreter Services, described in the Taxonomy of Common Factors, Dimensions and Themes (Table 1), point to the impact and weight of organizational level factors in interpreter use. Therefore, organizational level factors should be considered with care in developing recommendations for increasing the use of interpreters in the provision of patient care.

Although this study captured the perceptions of a range of staff members on the hospital units involved with interpreter services, from patient services managers to staff

nurses and clinical directors, a limitation is that the study sample might not have been large enough to capture perceptions of all hospital staff members involved with interpreter services. In addition, researcher or interviewer bias may have played a role as the entire study was conducted by one researcher. Finally, the sample of respondents interviewed was restricted to Yale-New Haven Hospital and thus the recommendations to increase use of interpreters in academic medical centers might not be generalizable to all academic medical centers.

A future study should be conducted by multiple researchers, some conducting interviews and others analyzing the data by forming buckets of themes, which would be cross checked after classification by each researcher. This step might increase the validity of such a study. Additionally, interviews with hospital staff should be conducted at various hospitals, ranging from large academic medical centers to smaller hospitals, in order to form a generalizable model to increase the use of interpreters across medical centers in the United States.

Despite these limitations, the findings suggest several interventions to address the underutilization of Interpreter Services. The following is a program proposal for implementing the suggested interventions.

VI. Program Proposal for increasing the use of interpreters at YNHH: Action Plan

The proposed program for increasing the use of interpreters by units at YNHH is a three stage approach: 1) Capitalizing on clinical staff; 2) Implementing a quality improvement initiative; 3) Increasing marketing of Interpreter Services.

A. Capitalize on clinical staff:

Capitalizing on clinical staff includes four recommendations: 1) Train bilingual clinical staff as interpreters; 2) Educate clinicians about Interpreter Services; 3) Maintain relationships between Interpreter Services and YNHH units and; 4) Enhance the availability of bilingual night shift staff available as interpreters.

Although interviews revealed that bilingual clinical staff are used regularly as interpreters at YNHH, these clinicians need formal training in proper interpreting techniques to provide quality interpreter services to patients and clinical staff. An informal study at Massachusetts General Hospital between 1990 and 1996 showed a frighteningly high level of clear misinterpretation, omissions and additions by untrained interpreters[52] and an analysis of taped interviews with untrained interpreters graphically illustrates the same[53]. Training for interpreters, then, is a very important step in providing adequate care to LEP patients and increasing their access to and satisfaction with health care. Training bilingual clinical staff in interpreting techniques will also increase positive communication between patients and their clinical care staff.

Interpreter training sessions should be refocused to cater specifically to bilingual clinical staff. Interpreter training should be less lengthy and more practical to maximize bilingual staff's time and their attendance to the training. Training sessions could be scheduled for 2 hours instead of the actual 6 hours and maintain the actual small group

sizes for optimal learning (5-6 people). Importance should be given to direct interpreting techniques and their importance instead of vocabulary of medical terminology as bilingual clinical staff possess more experience in patient care than would volunteer interpreters for whom it is necessary to provide medical terminology. This training would be done in addition to volunteer interpreter training, as it would focus on clinicians. It could be offered once a month by the interpreter coordinator or her staff and thus its cost would be the cost of 2 hours (plus preparation time, which equates to roughly 4 hours) of the interpreter coordinator's time. This recommendation both increases interpreter staff availability and increases awareness on YNHH units about the availability and use of interpreter services.

Education of clinical staff on the importance of using interpreters for LEP patients and on the mechanisms necessary to request an interpreter are also essential to increasing the use of interpreters at YNHH. Some steps to clinical staff education include providing signs in nursing stations displaying the phone number for Interpreter Services and outlining the laws requiring the provision of interpreters for LEP patients. Educational seminars during lunch would also raise knowledge of clinical staff about Interpreter Services. Rotating exhibits about interpreters displaying interpreter fact posters, which could stay for 2 days in a room on each unit could also provide a means to clinical staff to learn about Interpreter Services. A check and balance system could be introduced by having the clinical staff sign off with the nurse manager once they have read the exhibits. Additionally, educating clinical staff about the legal requirements to provide interpreters and the provision of interpreters as a clause in the YNHH patient's Bill of Rights might increase their understanding of the importance of using interpreters as part of providing

quality patient care and of their need to become a priority in the provision of care. Finally, providing interpreter training documents during new employee and resident orientation to YNHH would enable Interpreter Services to raise awareness about the service and its use to every staff member and set a standard of care as they enter YNHH.

Maintaining strong relationships between Interpreter Services and its staff and the clinical staff on each unit will both raise awareness that Interpreter Services exists and reinforce the use of interpreters. This could be achieved by having interpreter office staff visiting units every week to check if everything is functioning correctly with their interpreting equipment as well as just producing a physical presence, which clinical staff can mentally link to Interpreter Services. In addition, relationships between Interpreter Services and YNHH units might be strengthened by identifying on several units an Interpreter Champion. The Interpreter Services Champion would advocate for the use of interpreters in LEP patient care and provide guidance to staff on how and when to request an interpreter. Evidence of the success of champions in health care settings is widespread. It has been recognized for some time that informal communication networks exist within groups and that certain members influence the beliefs, values and behavior of others.[54] Individuals who promote change within a group have been described as "change agents"[55] or as "gatekeepers" because they informally influenced a group by controlling access to information.[56] Successful change was found to be associated with the activities of certain local individuals known as opinion leaders or idea champions.[57] Personal characteristics shown to be associated with opinion leaders were knowledge, communication and humanism.[58] The use of opinion leaders was found to improve the quality of care in a study which evaluated local opinion leaders as a method of

encouraging compliance with practice guidelines.[59] Thus, delegating responsibility to one clinical staff member, who has been previously identified as a change agent, to advocate for Interpreter Services on each unit would increase the use of interpreters among clinical staff members. This "champion" would be used a direct point of contact between the units and the Interpreter Services office to report challenges or satisfaction with the services.

A final step to capitalizing on clinical staff to increase the use of interpreters at YNHH would be to create a list of bilingual clinical staff members throughout the hospital for each working shift and by work unit to be available to each unit so that bilingual staff can be called in case of extreme need. This list would be placed on each nursing unit station bulletin board of important phone numbers and thus made available to all clinicians, as well as kept in a fixed location. This is especially important for the night shift as no in-person interpreters are available from Interpreter Services yet clinical staff might still need to request an in-person interpreters for certain patients, e.g., agitated, mentally ill, handicapped.

B. Implementing a Quality Improvement Initiative

Focusing on using interpreters as improving quality of care for patients includes 4 dimensions. It is necessary to end with the perception expressed by clinical staff that "getting by" with a language is sufficient for providing patient care. Since 90% of the care process comes directly from the physician-patient encounter[60], ensuring adequate communication in a language in which both the patient and physician are comfortable is

essential for providing quality care. As a respondent noted, "the way you view patient care is the way you view Interpreter Services. Patient friendly services need to include communication with patients." (IR 12)

Increasing use of Interpreter Services could be viewed as increasing patient safety and the quality improvement initiative. The cost and resources needed for educating clinical staff about Interpreter Services and for the training of clinical staff as interpreters might be included as part of YNHH's Patient Safety Initiative scheduled to be in process in the Spring of 2002. New measures and initiatives which link themselves to an existing project may be shown to be met with greater success and more rapidly than change which is scheduled on its own. Using the existing structure of the Patient Safety Initiative would enable the Interpreter Services to disseminate information about its services and claim a budget for its marketing projects.

An important step in demonstrating Interpreter Services as a patient safety or quality improvement initiative would be the provision of quarterly data feedback concerning monthly Interpreter Services use to nurse managers on each unit. Interpreter Services could target a percent increase in the number of calls for interpreters by unit and set a standard of a 5% increase in calls per year for new users of the service and provide incentives for units to reach that target increase of 5% in the number of calls. Additionally, units could be rewarded for good Interpreter Services performance numbers. Attention should be paid to need as well as call numbers in order to create a positive change and ensure that incentives are aligned with Interpreter Services' goals of providing access to interpreters for patients (simply focusing on a percent increase in number of calls has a potential for generating unnecessary calls by units competing for

the award). An example of an incentive is to create an "LEP Patient friendly unit" each quarter by looking at the increases in the number of calls by units. This award would have a similar effect to the Employee of the Month award and thus boost nurse managers and clinical staff's willingness to request interpreters for LEP patients.

Quality comes from improving processes, which invariably cuts across professional and functional boundaries. Bringing together multiple, often competing, discipline-oriented clinical departments in order to restructure an entire process, driven primarily by the need of the patient, presents a great challenge[61]. Looking at Interpreter Services as improving quality of care for patients would allow Interpreter Services to be included as part of the Six Sigma quality improvement process currently underway at YNHH. Six Sigma is a statistical methodology that has been used widely by General Electric to identify and remove deficiencies from its manufacturing and business processes and YNHH is working with GE to achieve similar improvements. Striving towards the Six Sigma level involves 5 steps: 1) defining a problem; 2) measuring what is important; 3) using statistical analysis to find the root causes of the variation in performance; 4) working together as a team to develop improvements and implement those changes; 5) sustaining those improvements over time[62]. These steps could be applied to Interpreter Services in identifying usage patterns of interpreters by units and the barriers faced by clinical staff to using interpreters for LEP patients. Using Six Sigma would allow the process to be accepted by all parties involved as it reflects a team effort and also to be maintained as Six Sigma provides a structure to sustain improvements over time. To find variation in health care, Six Sigma looks at four different types of metrics: service level, service cost, customer satisfaction, and clinical excellence[63]. Interpreter Services contains

aspects of these four metrics and all could be applied to focus on specific improvement projects for Interpreter Services. The future Six Sigma projects at YNHH include operational issues such as staff productivity and retention. Interpreter Services could link its recommendations for increasing the use of interpreters for LEP patients as part of this Six Sigma operational issue process as tagging on to an existing project will expedite the implementation of measures and provide additional support to Interpreter Services.

The increased use of interpreters by hospital units needs to originate from within the unit to be sustained, as a process that is owned and created by an internal team is accepted and sustained as opposed to a process that is imposed on a group from the outside. Therefore, clinical staff need to be empowered and provided the tools to be empowered to use interpreter services.

C. Increase marketing of Interpreter Services:

Increasing marketing of Interpreter Services would raise awareness of the availability and importance of using interpreters in providing care. Increasing marketing of Interpreter Services could be done in 4 ways: 1) Posting flyers/posters for clinical staff; 2) Sending memos to clinical staff reminding them of Interpreter Services use and procedures; 3) Posting signs for patients to see (waiting rooms, hallways); 4) Publishing Bulletin ads (every 6 months).

Posting flyers and posters for clinical staff would act as a reminder of the availability of interpreters for their patients and act on their memory as the signs would be there for clinical staff to see everyday.

Sending memos out to clinical staff about the use of interpreters would promote the importance of using interpreters in providing care for LEP patients and would act as a reinforcement that guidelines are in place at YNHH that dictate for the use of interpreters as part of the patient's Bill of Rights.

Posting signs about Interpreter Services for patients to see, such as in patient's lounges and waiting rooms as well as in the hallways, would empower patients and their families to ask their clinician for an interpreter when they feel that their English language level does not allow them to communicate adequately. Making Interpreter Services available to patients would increase their use as patients could ask for an interpreter without having to rely on the clinical staff's assessment of their language abilities. Most patients should be empowered to navigate throughout the hospital in a language that is familiar to them, especially since the provision of an interpreter is included in the YNHH Patient's Bill of Rights.

Finally, publishing Bulletin ads or articles every 6 months about the availability of interpreter for LEP patients would serve as a reminder to the clinical staff that interpreters as available and should be used. This would address in particular the factors of determinants of use of Interpreter Services. It would also provide a notice that Interpreter Services is active and growing. This is an important point to underline as a service that is not talked about is often forgotten or assumed to be diminishing in size and scope. The growth and strength of YNHH's Interpreter Services should be shared with the hospital community in order to increase its recognition by staff members, unit administrators and directors as well as patients.

VII. Summary Recommendations for Increasing the Use of Healthcare Interpreters for LEP patients at a Large Academic Teaching Hospital

In addition to the recommendations outlined in the program proposal for increasing the use of interpreters at YNHH, three factors need to be taken into consideration when promoting the use of interpreters at a large academic teaching hospital: 1) the importance of management support; 2) meeting demand; and 3) the areas of power and responsibilities of all parties involved in the communication through an interpreter, as illustrated by a model for increased communication through an interpreter (Figure 2). A summary of the recommendations for increasing the use of interpreters for LEP patients at a large teaching hospital, based on the case study of Yale-New Haven Hospital, is presented in Table 3 below. They include 1) Capitalizing on clinical staff; 2) Implementing a quality improvement initiative; and 3) Increasing marketing of Interpreter Services (Table 3).

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A. Importance of Management's support in accomplishing these goals

Increasing the use of interpreters for LEP patient care requires significant changes and improvements to the structure and processes of a large academic medical center and therefore, the support of managers and executives at every level in the process is essential to achieving these goals.

B. Meeting demand:

Increasing the pool of interpreters available is essential for providing services to meet the increasing demand for interpreters. Ensuring the sufficient staffing is available at the interpreter's office full time is a first important step in meeting demand for interpreters.

Secondly, linking the community to health care services, such as using resources of existing bilingual groups (Women of the World, Language Alliances) could provide added resources for interpreters. Additionally, contractors or volunteer interpreters can be used to meet the increased need for interpreters. A fourth possibility, if the interpreter program strongly relies on college or medical professional students as interpreters, is using high school seniors language groups that could provide additional resources for interpreters during the summer and vacations. Establishing such a relationship could be part of a high school senior council or project overseen by the interpreter's office. Meeting demand for increased services is essential to sustaining the credibility of the project proposition and ensuring its success. Therefore, the steps mentioned previously should precede changes in interpreter demand levels in order to anticipate the planned increase in demand for interpreters and thus allow Interpreter Services to continually provide the best possible service and response time.

C. Areas of power and responsibilities of all parties involved in the communication through an interpreter: A model for increased communication through an interpreter

The use of an interpreter to communicate with LEP patients will undoubtedly increase communication between the LEP patient and the clinician. Therefore, in any interpreter medicated interaction, the clinician should try to work in partnership with the interpreter, respecting the skills that each bring to the interaction and understanding how they can achieve the most appropriate outcomes for the patient. It is especially important for health professionals to be aware of: 1) The complex nature of the interpretation; 2) the skills the interpreter brings to the interaction; 3) the need to develop a flexible working style so that control can be shared between the health professional and the interpreter as appropriate;

and 4) the need for open discussion of the aims, goals, and procedures of the session and the ways in which the patient's language or cultural background may influence those[64].

The medical interpreter faces the challenges not only of producing words in another language but also of becoming a bridge that will allow constructive communication and the development of trust between clinicians and patients[65]. If the three members of the team know their goals, responsibilities, the process, their areas of power, and work together to develop a team relationship, everyone can work together towards the ultimate goal, which is the successful and caring treatment of the patient (Figure 2).

Communication Model, Areas of Power and Responsibilities for a Team Approach to Communication and Care through an Interpreter[66]:

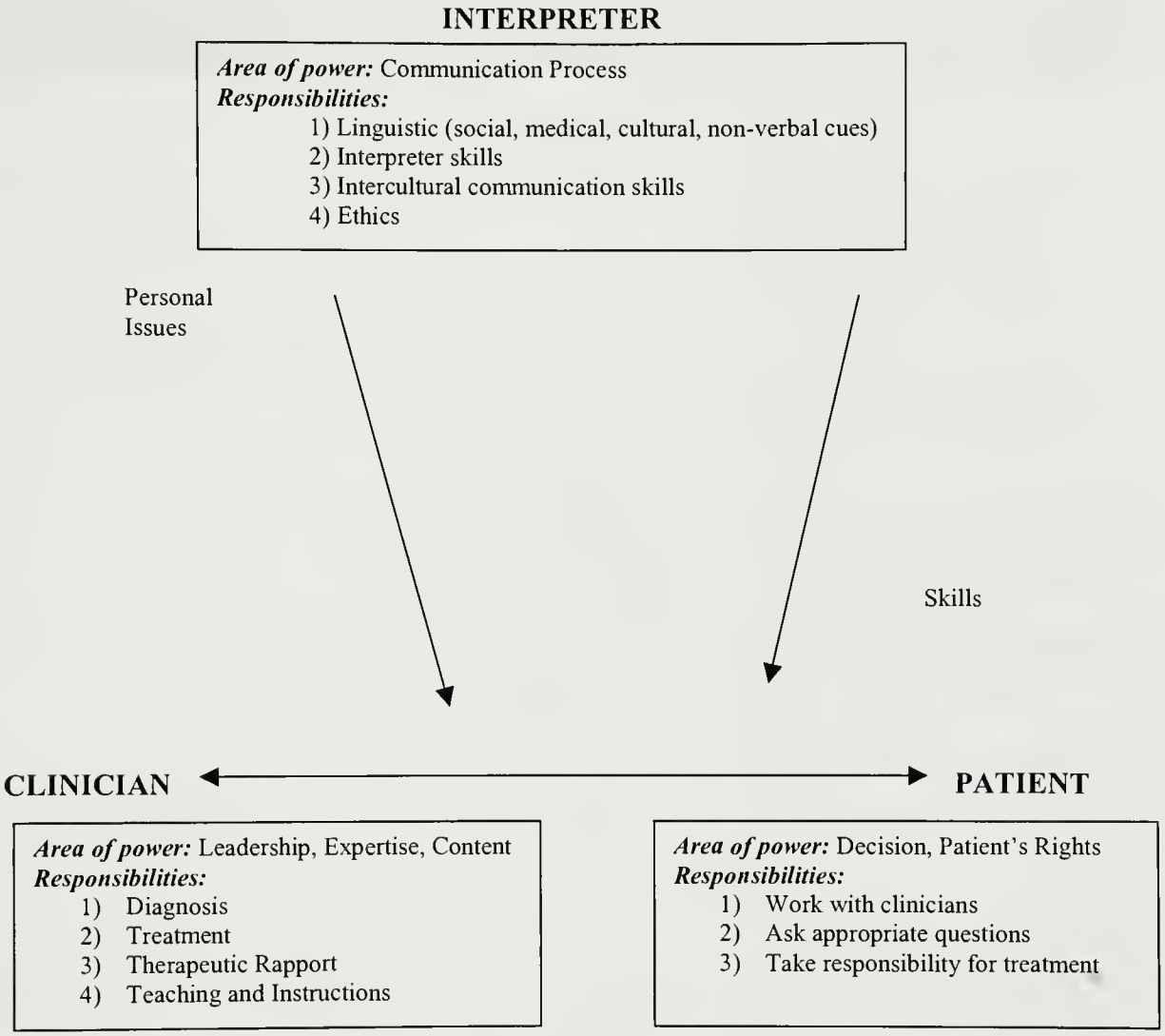


Figure 2

Table 3: Summary Recommendations for Increasing the Use of Health Care Interpreters for LEP Patients at a Large Academic Teaching Hospital

General Recommendations	Specific Actions	Implementation Examples
1. Capitalize on clinical staff	Training bilingual clinical staff as interpreters	- Shorten interpreter training sessions (2 hours vs 6) - Cater training to clinicians: practical interpreting notions
	Educate clinicians about Interpreter Services	-Signs in nursing stations -Educational lunch seminars -Rotating exhibits detailing Interpreter use -New employee and resident training on Interpreter use
	Maintain relationships between Interpreter Services and YNHH units	Interpreter staff visit units every week - Interpreter Champions on units
	Enhance the availability of bilingual night shift staff available as interpreters	- Create and disseminate to units a list of bilingual clinicians by work shift and location
2. Implementing a Quality Improvement Initiative	YNHH Patient's Safety Initiative	Link Interpreter project proposal measures to exiting Patient Safety Initiative
	Data feedback	- Target a 5% increase in calls per year - "LEP Patient friendly" unit award
	Six Sigma	Link Interpreter recommendations to Six Sigma operational issue process
3. Increase Marketing of Interpreter Services	Post Flyers/Posters for clinical staff	Remind clinical staff of service availability
	Send Reminder Memos	Reinforce guidelines for interpreter use
	Post signs for Patients	Empower patients to ask for Interpreter Services
	Publish Bulletin Ads	Every 6 months to act as a reminder notice

Appendix A:

Table 1:
Percent Difference in Population by Race for Connecticut: 1990-2000, Census Data 2000.

	Percent Difference between 1990 and 2000, based on 1990 Using Race Alone for Census 2000[1]
Total Population	+ 3.6
Hispanic or Latino	+ 50.3
White	- 4.2
African American	+ 13.3
American Indian and Alaska Native	+ 22.1
Asian	+ 67.8
Native Hawaiian and other Pacific Islander	+ 92.4
Some other race	+ 108.1

[1] One of the following six races: White, African American, American Indian or Alaska Native, Asian, Native Hawaiian and other Pacific Islander, some other race.
Source: U.S. Census Bureau, Census 2000.

Table 2:
Profile on General Demographic Characteristics of the New Haven Population, Census Data 2000.
(Based on reporting one race, numbers might add to more than the total population and percentages might add to more than 100% because individuals may report more than one race)

	Number	Percent of Total Population
Total Population	123,626	**100**
Hispanic or Latino	26,443	**21.4**
Mexican	3,483	2.8
Puerto Rican	17,683	14.3
Cuban	371	0.3
Other Hispanic or Latino	4,906	4
African American	46,181	**37.4**
Asian	4,819	**3.9**
White	53,723	**43.5**

Source: U.S. Census Bureau, Census 2000.

Appendix B :

Discussion Guide:

Use of Healthcare Interpreters for Limited English Proficiency Patients in the Delivery of Care at Yale-New Haven Hospital

Overview of interpreter services:

1) Can you tell me about your latest experience with the interpreter service?

2) In what situations do you call for interpreters? (probe for need for informed consent, surgery or unconsciousness that requires decisions to be made by a third party who does not speak English, communicating with family members)

3) Have you ever had problems with reaching the interpreter service? Tell me about that time. (Probe on proper equipment, knowledge and bias of using phone interpreters, quality of service)

4) How many times did you use the interpreter services in the last year?

5) How many times could you have used interpreters but did not, in the last year?

6) Would you characterize the use of interpreter service in your department as:
   a) Over-utilized
   b) Under-utilized
   c) Utilized in the right amount? (what ensures that it is adequately used?)

   Why would you characterize it as such?

7) Do you have any additional comments on increasing education and the use of interpreters in the delivery of care?

Biographical questions:

8) What is your position/title?

9) Do you speak any foreign languages? If yes, which one(s)?

Thank you very much for your time.

Appendix C:

Yale-New Haven Hospital
Interpreter Services: Quick Facts

Yale New-Haven Hospital Interpreter Services:

- Use one phone number 24 hours/day, 7 days/week: 688-7523 for an interpreter
- Office Hours: 7:30am-4pm
- Phone Interpreting: 24 hours / 7days a week, 140 languages

Basis for provision of interpreters:

- Increase communication between patient and provider
- Increase compliance with treatment as patient understands treatment procedures
- Respect patient confidentiality
- Respect parent-child relationship structure and roles; avoid role reversals
- Provide emotional support
- Foster informed decision-making

Laws and Regulations:

- Patient's Rights: respect, privacy, full explanation of care, confidentiality, emotional support, informed decision making
  Title VI, Civil Rights Act of 1964: Language Assistance Obligation:
  Recipients of Federal financial assistance must take steps to ensure that Limited English Proficiency (LEP) persons can meaningfully access health and social services
  National Committee for Quality Assurance (NCQA): measures the availability of linguistically appropriate services in the draft Medicaid version of HEDIS.
- JACHO
- ADA 1990

Fact:

- *Interpreter Services takes over 9,000 requests for interpreters per year, in over 60 different languages*

"Multiculturalism is not an uncritical acceptance of the values and practices of all other cultures. It is the awareness that there are a range of different ways to live, which offer different solutions to the problems faced by human beings, combined with a recognition that our own solutions – practices, institutions, values and moral rules – may not be the best ones"
Arras & Steinback, 1999.

Appendix D:

Interpreter Discussion Guide:

Use of Healthcare Interpreters for Limited English Proficiency Patients in the Delivery of Care at Yale-New Haven Hospital

Overview of interpreter services:

1) Can you tell me about your latest experience as an interpreter at YNHH?

2) In what situations are you called to interpret? (probe for need for informed consent, surgery or unconsciousness that requires decisions to be made by a third party who does not speak English, communicating with family members)

3) Have you ever had problems being oriented in the units when called to interpret? Tell me about that time. (Probe on proper equipment, knowledge and bias of using phone interpreters, quality of service)

4) How often are you called to interpret when on your volunteer shift?

5) How often do you feel could you be called to interpret but are not, when on your volunteer shift?

6) Would you characterize the use of interpreters at YNHH as:
   a. Over-utilized
   b. Under-utilized
   c. Utilized in the right amount? (what ensures that it is adequately used?)

   Why would you characterize it as such?

7) Do you have any additional comments on increasing education and the use of interpreters in the delivery of care?

Biographical questions:

8) What is your position/title?

9) Do you speak any foreign languages? If yes, which one(s)?

Thank you very much for your time.

Appendix E:

Table 1: Summary Table by Requesting Department Affiliation: Total Requests for Interpreters by Requesting Departments Affiliation, fiscal year 2001.

Requesting Department Affiliation	Total Number of Requests	Number of Discharged Patients	Percentage of Discharged patients using interpreters
Ambulatory Services	1,683	N/A	N/A
FPP Clinic	1,733	N/A	N/A
Hospital	5,750	42,065	13.7%
Total	9,166	N/A	N/A

Table 2: Total Requests for Interpreters for the Ambulatory Services Department, one year span (October 1st, 2000 to September 31st 2001)

Requesting Department Affiliation	Requesting Department	Number of Requests
Ambulatory Services	PCC/Pediatric TMP B	405
	PCC/Adult TMP B	388
	Cardio Stress Lab CB3	312
	Winchester Chest Clinic FMP 2	192
	Women's Center TMP B	110
	Radiation Therapy/HTR 1	93
	Adler Geriatric Clinic	40
	WIC Center DCB 24	37
	Dental Clinic, Dana 2	36
	Nathan Smith Clinic NS 1	17
	EEG/EMG FKN 2	14
	Radiation Therapy/HTR B	14
	GI Procedure Center CB 3	13
	Transfusion Services 363CB	9
	Photopherisis, Htr 4	2
	Clinic Registration, TMP B	1
	Total for Ambulatory Services	1,683

Table 3: Total Requests for Interpreters for the hospital, one year span (October 1st, 2000 to September 31st 2001)

Table 3a: High Users (more than 100 requests for interpreters)

Requesting Department Affiliation	Requesting Department	Number of Requests
Hospital	ED Adult SP 1	835
	Rehab SVCS/OP Adult YPB 1	447
	4-5 EP Perinatal	397
	Admitting EP&CH	272
	Yale Psychiatric Hospital	186
	Admitting/Preadmission Testing	176
	DI/MRI Dana B	156
	ED Pedi WP 1	151
	3 WP Pediatric Surgery	150
	DI/ 2 SP	139
	Rehab SVCS/OP Children's 2 WP	137
	HI-Risk OB Dana 2	130
	HI-Risk OB 4-5 EP	131
	10 WP OB	105
	VSD	100

Table 3b: Medium Users (30 to 99 requests for interpreters)

Requesting Department Affiliation	Requesting Department	Number of Requests
Hospital	Nutrition Clinic, CB B	93
	5-5/6 EP Medicine	92
	11 WP OB	89
	DI/Mammography YPB B	84
	7-3 SP Pediatric	84
	ED CIU SP 1	83
	6-3 SP Medicine	82
	7-2 SP Pediatric	81
	5-7/8 EP Medicine	79
	9-5/6 EP Medicine	74
	6-4 SP Surgery	74
	4 WP L&D	71
	3 EP 1 Day Surgery	71
	7 WP AD	65
	5-3 SP Medicine	61
	4 WP NBSCU	55
	4-7/8 EP	50
	ED Urgent Care SP 1	46
	5-1 SP CCU	45
	7 WP PICU	45
	9-WP GYN	42
	7-7/8 EP Surgery	40
	7-5/6 SP Medicine	40
	7-4 SP Pediatric Research	38
	DI/U/S YPB B	38
	9-7/8 EP Medicine	37
	6-1 SP SICU/NICU	37
	5-2 SP Medicine & BMT	36
	Patient Finance/Billing	36
	6-5/6 EP Surgery	34
	Hospital Admitting York Street Info Desk	34
	3 SPOR Surgery & Recovery	31

Table 3c: Low Users (less than 30 requests for interpreters)

Requesting Department Affiliation	Requesting Department	Number of Requests
Hospital	8 WP Med/Onc	25
	6-7/8 EP	24
	10-7/8 EP Psychiatry	24
	DI/Pedi 2 WP	24
	Patient Relations 1050 CB	24
	8-7/8 EP Rehab	23
	DI/Nuclear Medicine	22
	Food and Nutrition	22
	Unknown Location	17
	5-4 SP MICU & Dialysis	16
	Woman's Education GB 25	15
	3 WP CTICU	15
	10-7/8 EP Temporary Location	11
	DI/4-6 EP Recovery	9
	DI/YPB 1	8
	Child Psych Win I	8
	Pediatric Endocrinology LMP 3	8
	Hematology Lab CB 438	7
	3 SP OR Waiting Room	7
	General Clinical Research Center, HRT 5	6
	Administration	6
	DI/ED SP 1	5
	DI/MRI Mobile Van, 20 York	5
	Hospital/Patient Information	5
	Pulmonary Lab FKN 2/Win Chest	4
	DI/Nuclear/Cardio Lab 2 SP	4
	Religious Ministries GB 306	4
	Public Relations GB 4	4
	11 WP, Vital Statistics 1102	3
	Temple Surgical Center	3
	Public Relations GB 4	2
	Lithotripsy Van SP 1 Near Auxilliary	2
	7-1 SP Pediatrics	2
	7 WP CTICU	1
	Admitting/YPH GB 534	1
	DI/Long Warf	1
	DI/Reception 2 EP	1
	Epidemiology & Quality Improvement	1
	Hospital Security	1
	Medical Records WP 1	1

Table 4: Total Requests for Interpreters for the FPP Clinic, one year span (October 1st, 2000 to September 31st 2001)

Requesting Department Affiliation	Requesting Department	Number of Requests
FPP Clinic	Orthopaedic Clinic YPB 1	457
	Genetics Win III	214
	Plastic Surgery YPB 2	190
	Pediatric Specialties, 2CH	194
	Urology Clinic, YPB 3	128
	Neurology Clinic YPB 3	87
	Surgical Specialties, YPB 3	77
	Eye Center BB 2	70
	Neurosurgery, TMP 4	59
	ENT Clinic YPB 4	50
	Reproduction Medicine, Dana 2	38
	Dermatology Clinic, YPB 4	29
	Pediatric Neurology, 3089 LMP	25
	Dana 3 Medical	22
	Med/Oncology Clinic, YPB 2	14
	Vascular Surgery, FMB 137	23
	GYN/Onc Clinic, YPB 3	11
	Organ Transplant & Immunology, 112	9
	Pediatric Neurosurgery, TMP 9	9
	Pediatric Respiratory Medicine, FMP 509	9
	Pediatric Nephrology, LMP 3086	8
	OPS	4
	Cardio Vascular Med, FMP 3	2
	Cardiothorasic Surgery, FMP 3	1
	Eye Center, BB 3	1
	Pediatric Cardiology, 302 LLCI	1
	Pediatric Hematology/Oncology	1
	Total for FPP Clinic	1,733

Appendix F:

Table 1. Actual Versus Perceived Number of Requests for Interpreters per YNHH Unit for fiscal year 2001.

Requesting Department Affiliation	Requesting Department	Actual Number of Requests[1]	Perceived Number of Requests[2]	Actual vs. perceived # requests difference[3]
Hospital	Admitting/Preadmission Testing	176	20	156
Hospital	5-5/6 EP Medicine	92	12	80
Hospital	6-5/6 EP Surgery	34	15	19
Hospital	10 WP	105	48	57
Hospital	8-7/8 EP Rehab	23	24	-1
Hospital	11 WP OBS/GYN	89	15	74
Hospital	9 WP GYN	42	20	22
	Yale Psychiatric Hospital	186	60	126
Hospital	4 WP NBSCU	55	48	7
Hospital	5-4 SP MICU	16	6	10
Hospital	3 WP CTICU	15	10-20	0
Total		833	283	550

[1] Actual number of requests is defined as the number of requests for interpreters received by Interpreter Services and recorded in the Interpreter Services database for fiscal year 2001.

[2] Perceived number of requests is defined as the number of interpreter requests submitted by a hospital unit in fiscal year 2001 as given during unit manager interviews. Unit managers were asked "How many times did you use interpreter services in the past year?" and probes for perceived unit requests were used during the interview.

[3] Difference between actual and perceived number of requests is defined as:
actual requests – perceived request.

Appendix G :

Code Structure:
Interpreter Interviews

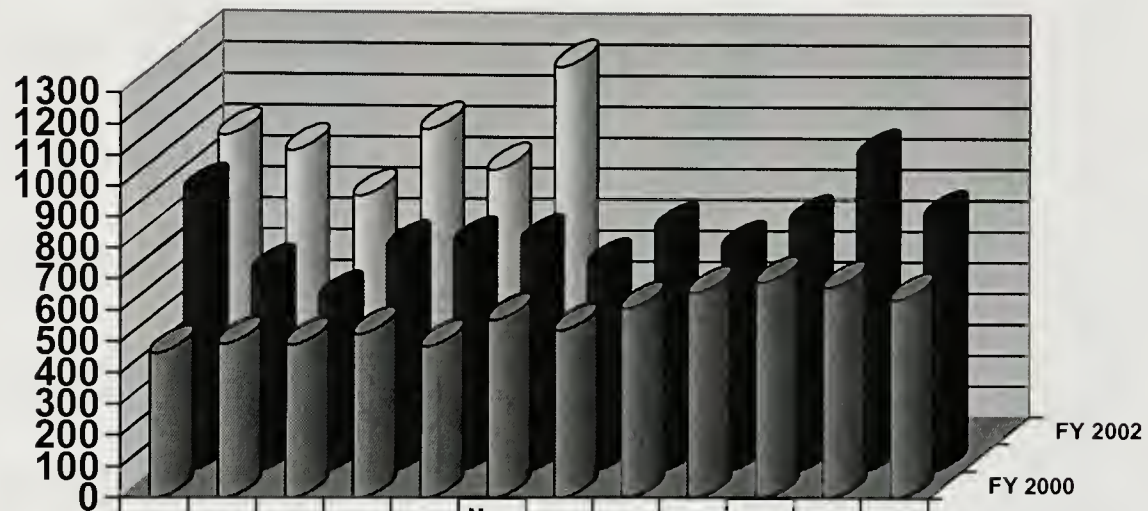
1. Perceptions Regarding Use of Interpreters
   - 1.1 Time Constraints
     - 1.1.1 Long time lag to get interpreter on unit
     - 1.1.2 Not possible to wait for interpreter in emergency situations
     - 1.1.3 Getting interpreter will disturb medical staff schedule (Rehab)
     - 1.1.4 Phone system does not work well for interpreting
     - 1.1.5 Perception that obtaining interpreter is slow and inefficient because system used to be slow and perceptions have not changed towards new and faster system
   - 1.2 Convenience
     - 1.2.1 Use medical staff because they know medical terminology (but so do interpreters)
     - 1.2.2 Use whoever is closest as interpreter (medical staff or family members) versus requesting an interpreter
     - 1.2.3 Preference for in-person interpreters versus over-the-phone interpreters for staff who has not used the phone system much
   - 1.3 Adoption of interpreter services once used often
     - 1.3.1 Use of interpreters increases with comfort in seeing them at work
     - 1.3.2 Positive experiences with interpreters provide proof of their increase in quality of care

2. Lack of Awareness
   - 2.1 About importance of using interpreters
   - 2.2 About phone system and its use
   - 2.3 Procedure for requesting an interpreter is easy to forget because not used very often by all staff members
   - 2.4 Need to create relationships between interpreter services and hospital units to increase trust

3. Recommendations for increasing use of interpreters
   - 3.1 Training programs/ Nurse education
     - 3.1.1 Include interpreter requesting procedure in CBT
     - 3.1.2 Educational seminars for interpreter use
     - 3.1.3 Include interpreter training for new employee training at YNHH
   - 3.2 Marketing/ Promotion
     - 3.2.1 Posters about interpreting and the services offered
     - 3.2.2 Flyers in medical staff mailboxes
     - 3.2.3 Newsflashes in the Bulletin and hospital publications

Appendix H:

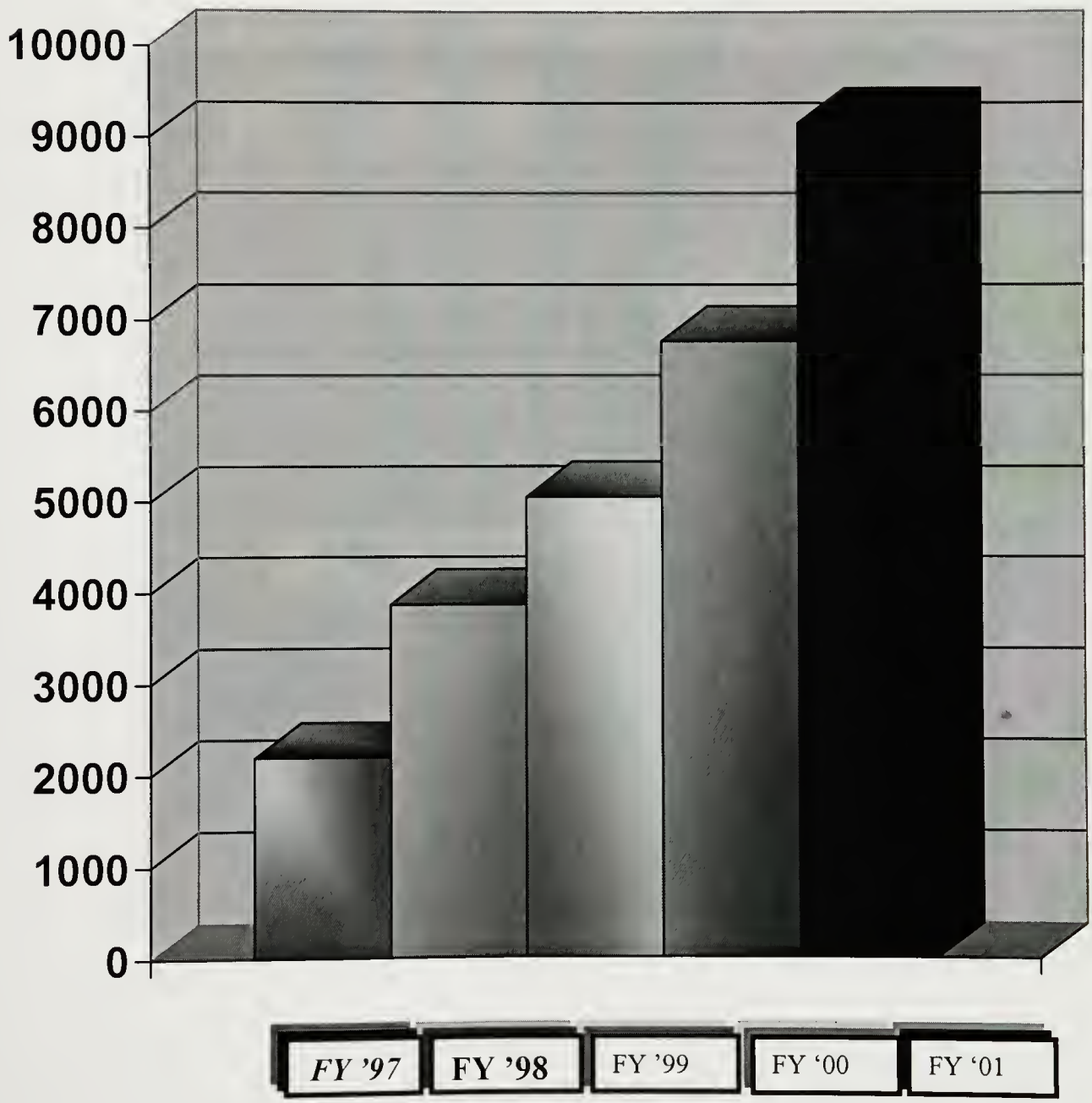
Total Number of Requests by Month Three-Year Period



	Oct	Nov	Dec	Jan	Feb	March	Apr	May	June	July	Aug	Sept
FY 2000	464	494	492	527	488	574	541	614	663	697	681	641
FY 2001	899	639	554	717	732	740	664	781	722	807	1019	823
FY 2002	990	942	796	1013	882	1216						

Appendix I:

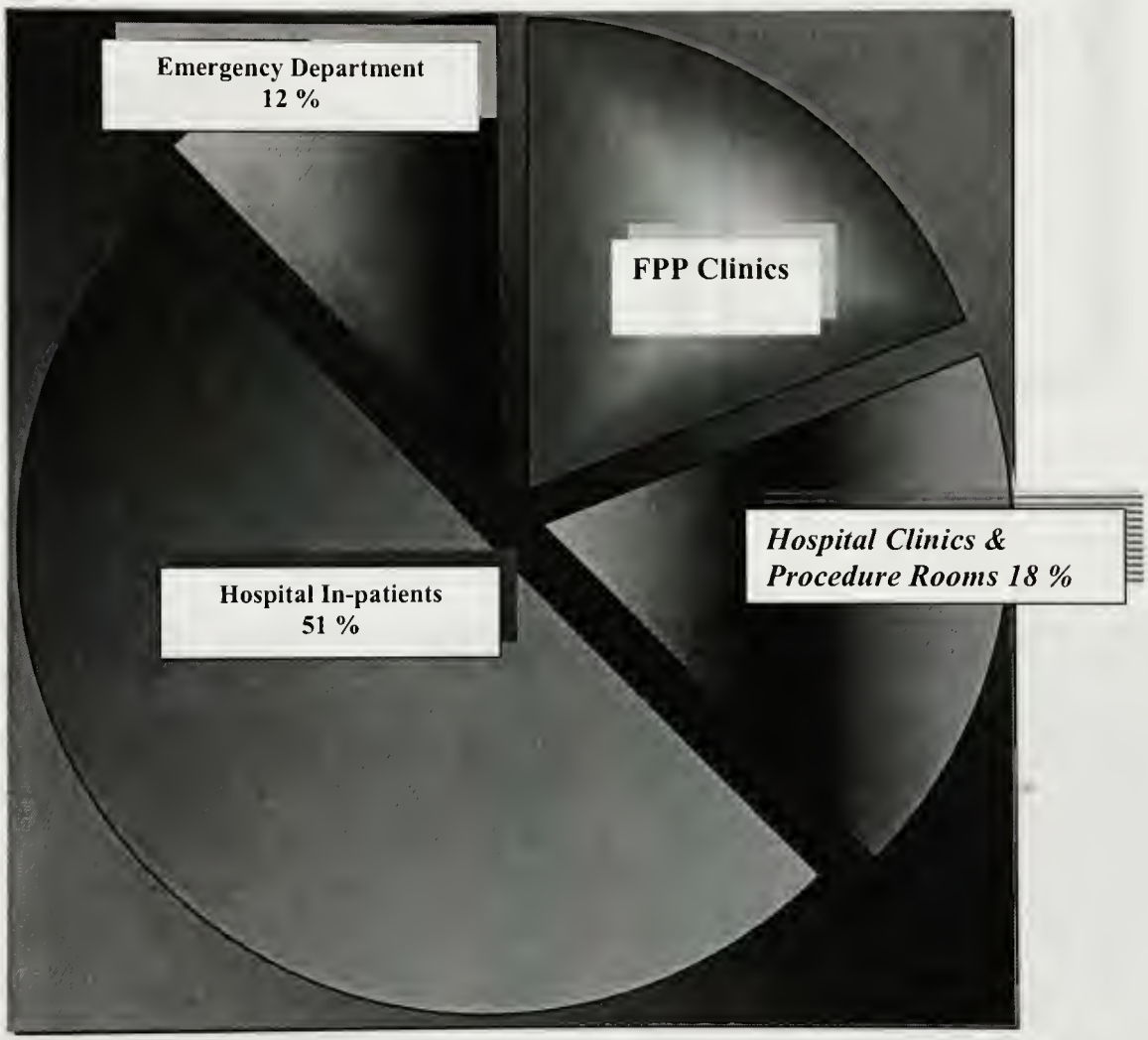
Interpreter Request Report
Comparative Totals for Five Years



Appendix J:

Interpreter Requests Location Distribution

Based on 9171 Requests



Appendix K:

Proportional Language Distribution

Based On 9067 Requests for FY 2001

ASL 3.7 %

1-2% Each Arabic, Croatian. Russian, Mandarin, Turkish, French, Portuguese, Persian

The remaining requests are divided among 33 different languages

Spanish 78 %

Ressources :

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[1] US Bureau of the Census, Profile of Selected Social Characteristics, 2000
[2] Dwyer, James. Babel, Justice and Democracy: Reflections on a Shortage of Interpreters at a Public Hospital; Hastings Center Report; 31(2): 31-36; 2001
[3] Assuring Cultural Competence in Health Care: Recommendations for National Standards and an Outcomes-Focused Research Agenda. Part 1: Recommendations for National Standards. Office of Minority Health, Public Health Services. U.S. Department of Health and Human Services (www.omhrc.gov/clas/po.htm)
[4] US Department of Health and Human Services, Office for Civil Rights. Title IV, Language Assistance Obligation; LEP Fact Sheet, Government Center, Boston, MA
[5] Goode, T. et al. National Center for Cultural Competence, Policy Brief 2; Georgetown University Center for Child Health and Mental Health Policy; 2000
[6] Goode, T and al. Linguistic Competence in Primary Health Care Delivery Systems: Implications for Policy Makers; Policy Brief 2; National Center for Cultural Competence, Georgetown University Child Development Center; Winter 2000
[7] Ibid, Policy Brief 2, 2000
[8] Ibid, Policy Brief 2, 2000
[9] Journal of the American Medical Association, 1997
[10] Goode, T and al. Linguistic Competence in Primary Health Care Delivery Systems: Implications for Policy Makers; Policy Brief 2; National Center for Cultural Competence, Georgetown University Child Development Center; Winter 2000
[11] Ibid, Policy Brief 2; 2000
[12] Ibid, Policy Brief 2; 2000
[13] MacLachlan, Malcom. Culture and Health. John Wiley & Sons; New York, NY; 1997
[14] Manson, Aaron. Language Concordance as a Determinant of Patient Compliance and Emergency Room Use in Patients with Asthma. Medical Care. 26(12); 1988
[15] Sarver J, Baker DW. Effect of Language Barriers on Follow-up Appointments after an Emergency Department Visit. Journal of General Internal Medicine. 15(4): 256-264; 2000
[16] Flores G, Abreu M, Olivar M, Kastner B. Access Barriers to Health Care for Latino Children. Archives of Pediatry and Adolescent Medicine; 152: 1119-1125; 1998
[17] Feinstein J. The relationship between socioeconomic status and health: a review of the literature. Milbank Q.; 71: 179-322; 1993
[18] Deyo R, Diehl A, Hazuda H, Stern M. A simple language-based acculturation scale for Mexican-Americans: validation and applications to health care research. American Journal of Public Health; 75: 51-55; 1985
[19] Marks G, Solis J, Richardson J, Collins L, Birba L, Hisserich J. Health Behavior of elderly Hispanic women: does cultural assimilation make a difference? American Journal of Public Health; 77:1315-1319; 1987
[20] Woloshin, Steven, et al. Is Language a Barrier to the Use of Preventative Services? Journal of General internal Medicine; 12:472-477; 1997
[21] Naish J, Brown J, Denton B. Intercultural consultations: Investigation of factors that deter non-English speaking women from attending their general practitioner for cervical screening. BMJ; 309: 1126-1128; 1994
[22] Jacobs, E. et al. Impact of Interpreter Services on the Delivery of Health Care to Limited English Proficiency Patients. Journal of General Internal Medicine; 16:468-474; 2001
[23] Pitkin K, Baker DW. The Effect of Limited English Proficiency on Use of Physician Services. Association for Health Services Research, RAND; 14:81
[24] Gordon AK. Deterrents to Access and Services for Blacks and Hispanics: the Medicare Hospice Benefit, Healthcare Utilization and Cultural Barriers. Hospice Journal. 10(2): 65-83; 1995
[25] Carrasquillo O, Orav J, Brennan T, Burstin H. Impact of Language Barriers on Patient Satisfaction in an Emergency Department. Journal of General Internal Medicine; 14: 82-87; 1999
[21] Baker DW, Hayes R, Fortier JP. Interpreter Use and Satisfaction with Interpersonal Aspects of Care for Spanish-speaking Patients. Medical Care; 36(10): 1461-1470; 1998

[26] Baker DW, Hayes R, Fortier JP. Interpreter Use and Satisfaction with Interpersonal Aspects of Care for Spanish-speaking Patients. Medical Care; 36(10): 1461-1470; 1998
[27] Morales L, Cunningham W, Brown J, Liu H, Hays R. Are Latinos Less Satisfied with Communication by Health Care Providers? Journal of General Internal Medicine; 14: 409-417; 1999
[28] Todd K, Samaroo N, Hoffman J. Ethnicity as a Risk Factor for Inadequate Emergency Department Analgesia. JAMA. 269: 1537-1539; 1993
[29] Tocher TM, Larson E. Quality of Diabetes Care for non-English Speaking Patients: A Comparative Study. Western Journal of Medicine. 168(6): 504-511; 1998
[30] Manson A. Language Concordance as a Determinant of Patient Compliance and Emergency Room Use in Patients with Asthma. Medical Care. 26: 1119-1128; 1988
[31] Hampers L, Cha S, Gutglass D, Binns H, Krug S. Language Barriers and Ressource Utilization in a Pediatric Emergency Department. American Academy of Pediatrics. 103(6): 1253-1256; 1999
[32] Woloshin S, Bickell NA, Schwartz LM, Gany F, Welch G. Language Barriers in Medicine in the United States. JAMA. 273: 724-728; 1995
[33] Tocher T, Larson E. Do Physicians Spend More Time with Non-English Speaking Patients? Journal of General Internal Medicine. 14: 303-309; 1999
[34] Beauchamp, Tom; Childress, James. Principles of Biomedical Ethics. Oxford University Press, 4th and 5th Editions.
[35] Kimball CP. Medicine and Dialects. Annals of Internal Medicine. 74: 137-139; 1971
[36] Putsch, Robert. Joyce, Marie. Dealing with Patients from other Cultures. Clinical Methods, 3rd Edition. Boston: Butterworths, 1050-1065; 1990
[37] May, William F. The Physician's Covenant. Second Edition, Westminster John Knox Press, 2000
[38] Ibid, 2000
[39] Ibid, 2000
[40] Ibid, 2000
[41] Rothman David J. The Discovery of the Asylum. Little, Brown & Company Publishers; 1971
[42] Blackhall, Leslie; Frank, Geyla; Murphy, Sheila; Michel, Vicki; Bioethics in a Different Tongue: The Case of Truth-Telling. Journal of Urban Health. The New York Academy of Medicine. 78(1); 2001
[43] Dwyer, James. Babel, Justice, and Democracy: Reflections on a Shortage of Interpreters at a Public Hospital; Hastings Center Report: 31(2); 2001
[44] Betancourt JR, Jacobs EA. Language Barriers to Informed Consent and Confidentiality:: the Impact on Women's Health. Journal of the American Medical Women's Association. 55(5): 294-295; 2000 Fall
[45] Crabtree BF, Miller WL. Doing Qualitative Research. Thousand Oaks, California: Sage Publications; 1999
[46] Glaser BG, Strauss AL. The Discovery of Grounded Theory: Strategies for Qualitative Research. Chicago, III: Aldine; 1967.
[47] Miles MB, Huberman AM. Qualitative Data Analysis: An Expended Sourcebook. Thousand Oaks, California: Sage Publications; 1994.
[48] McCraken G. The Long Interview. Newbury Park, California: Sage Publications; 1988.
[49] Glaser BG, Strauss AL. The Discovery of Grounded Theory: Strategies for Qualitative Research. Chicago, III: Aldine; 1967.
[50] Constas MA. Qualitative analysis as a public event: the documentation of category development procedures. American Educational Research Journal. 1992;29:253-266.
[51] Miles MB, Huberman AM. Qualitative Data Analysis: An Expended Sourcebook. Thousand Oaks, California: Sage Publications; 1994.
[52] Battle, Margarita C. Telephone conversation with Cyntia E. Roat, 1997. CCHCP and Asian Health Services, Survey of 23 Medical Interpreter Training Programs in the United States and Canada; May 1998
[53] Downing, Bruce T. Professional Interpretation: Insuring Access for Refugee and Immigrant Patients. Presented at the 1991 National Conference on Health and Mental Health of Soviet Refugees, Chicago.
[54] Borbas et al. The Role of Clinical Opinion Leaders in Guideline Implementation and Quality Improvement. CHEST; 118: 24S-32S; 2000.
[55] Lippitt et al in Bennis QR ; Besne K ; Chie R. The planning of change. Holt, Rinehart, and Winston. 1969: 11-22.
[56] Lewin K. Group Discussion and Social Change. In: Newcomb J. Hostley E, ed. Readings in Social Psychology. New York, NY. Holt, Rineharts and Wilson, 1947.

[57] Greer AL. The State of Art versus the State of Science. Internal Journal of Technological Assessment in Health Care; 4: 5-26; 1988.
[58] Hiss RG, MacDonald R, Davis WK. Identification of physician educational influentials (EI's) in small community hospitals. In: Proceedings of the 17th Annual Conference Research in Medical Education; 283-288; 1978
[59] Lomas, J et al. Opinion Leaders vs Audit and Feedback to Implement Practice Guidelines, Delivery After Previous Cesarean Section. JAMA; 265 (17): 2202-2207; 1991
[60] Dwyer, James. Babel, Justice and Democracy: Reflections on a Shortage of Interpreters at a Public Hospital; Hastings Center Report; 31(2): 31-36; 2001
[61] Buck, Charles R, Jr. Health Care though a Six Sigma Lens. General Electric Company, Fairfield, CT. The Milbank Quarterly; 76(4); 1998
[62] Data Strategies and Benchmarks, National Health Information, Atlanta GA; Volume 6, Number 1; January 2002
[63] Data Strategies and Benchmarks, National Health Information, Atlanta GA; Volume 6, Number 1; January 2002
[64] Isaac, Kim M. What About Linguistic Diversity? A Different Look at Multicultural Health Care. Communication Disorders Quarterly 22(2): 110-113; Winter 2001
[65] Battle, Margarita C. Cross-Cultural Dilemmas in the Medical Encounter Medical Interpreters Contend With, Cross-Cultural Misunderstanding. MGH Office of Interpreters, 1994.
[66] Battle, Margarita C. Cross-Cultural Dilemmas in the Medical Encounter Medical Interpreters Contend With. Massachusetts General Hospital, Office of Interpreters, 1994

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